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ABSTRACT

The textbook is addressed to students beginning their second year in a Marine Corps Junior Reserve Officer Training Program. Part One (111 pages) discusses psychology, group dynamics, human relations skills, communication skills, military instruction, and problem solving as they apply to a leader. Also discussed are leadership principles, indicators of leadership, and the role of the officer. The second part, Military Orientation and Organization, describes the organization of the Marine Corps including Marine aviation, the Interior Guard, and Military Police. The military-related skills of land navigation and orienteering (a combination of cross-country running and a land navigation) are explained. Part Three contains background information related to drill and associated ceremonies. The last part presents a basic understanding of the operation of the M-14 rifle and the sidearm (.45 pistol). Study questions conclude most of the chapters and a bilbiography is included for each of the four parts. (Author/MS)

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LEADERSHIP IN ACTION

A TEXT FOR U.S. MARINE CORPS JUNIOR ROTC

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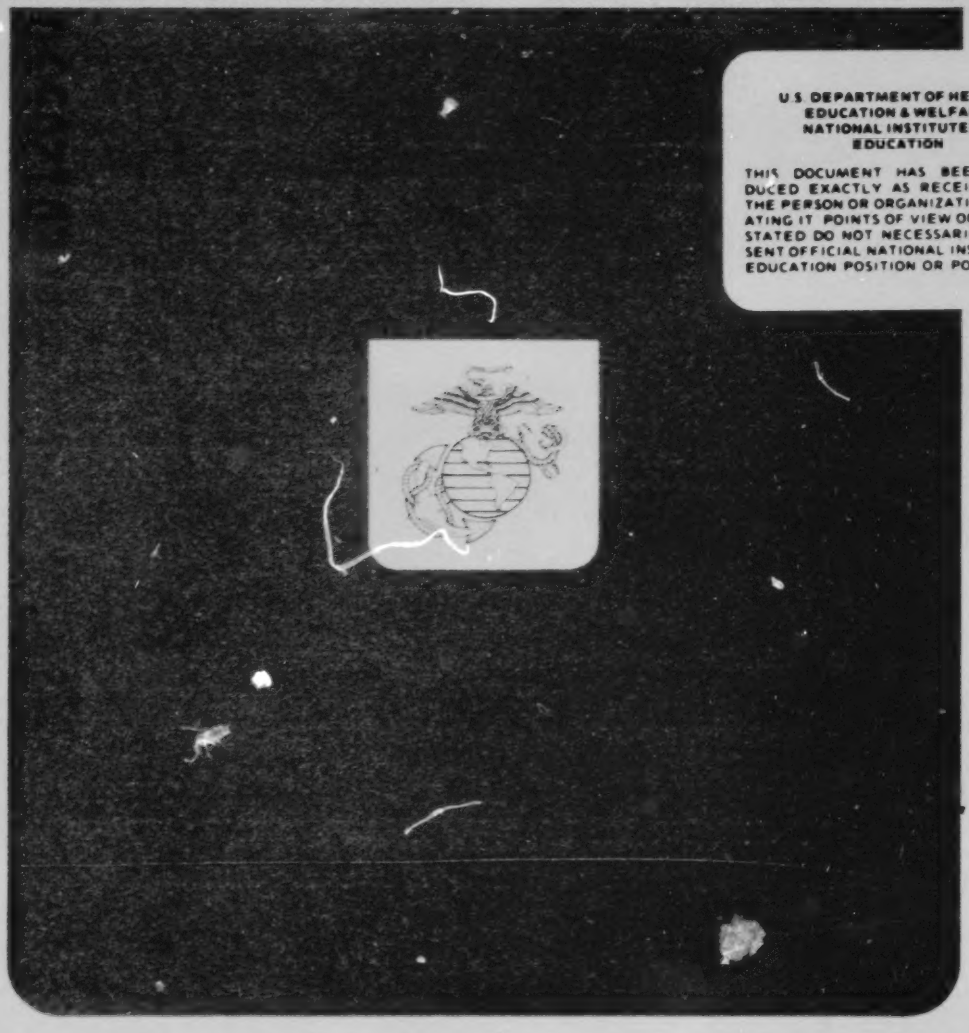

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FOREWORD

Welcome Aboard! You are now moving into the second year of Marine Corps Junior ROTC, into new areas of study, new experiences, new opportunities to excel in a leadership role. You know by now that the name of the game in JROTC is LEADERSHIP—every lesson and every exercise is directed to the development of leadership traits by each individual cadet. The traits of a leader mark him as very positive person who has definite goals—who knows where he is going and how to get there. He does in fact possess the skill, knowledge, and self-confidence that enable him to attain the goals which he sets for himself. The skills a leader needs are both mental and physical, and military knowledge is a very small part of the program. Through study and practice the cadet attains by his own personal effort those characteristics which mark him as a real leader. How he does these things is the subject of the next year's study and practice.

Remember that the men and women who practice leadership in the military services are no different from those in any other job. The teacher, the businessman, the athletic coach, and the quarterback all are leaders, and as such practice precisely the same leadership skills demonstrated by the captain and the sergeant. What is important is not the field of endeaver, but doing the job, accomplishing the mission. The band director who successfully stages a concert, the plant manager who notes an increase in production, and the lawyer who proves the innocence of his client have all reaped the rewards of effective leadership. The measure of success in this business of leadership is much more than personal satisfaction, although that is a real part of the reward, but the attainment of a goal by a group working together is the real proof of the group leader's success.

One important, though often neglected, aspect of leadership is the ability to be a good follower. Just as the high school principal must follow the guidelines established by the school board, so the squad leader must execute the movements commanded by his platoon commander. A model builder has to follow the printed instructions, and the private must obey the orders of the sergeant. But each of these people is carrying out what has been assigned to him; they are each one doing what needs to be done, as told to him by another, in the manner prescribed.

In the coming year you will have many opportunities to follow, and more chances to lead. You will study and practice the concepts, principles, and techniques of leadership. You'll begin to develop an insight into the basic motivations of men, and learn how to apply man's needs to cause them to want to do what has to be done.

Part one of this text deals with people, as individuals and in groups. Some knowledge of individual psychology and the way a man feels toward another is part of the material important to a leader, as is a knowledge of the relationships among a group of persons. How do we evaluate the performance of a group; what indicators are there of a need for change; how can a leader know what the reaction of the group will be to a particular situation? Answers to these and other like questions will be explored in this section. The learned skills of communication, instruction, and problem solving as they apply to a leader will also be discussed. Finally we will touch on the role of the officer—what he is, and should be—how he becomes what he is expected to be.

Part Two takes up the military, particularly the Marine Corps—how and why the modern Marine Corps is organized as it is, what makes up the ready Marine team, and how organization supports the Marine rifleman, the all important element of combat. Also covered are security of facilities and property and some military-related skills that have become international sport: land naviation and orienteering.

Part Three is primarily drill, and the background information that is directly related to drill and associated ceremonies. Company drill and inspections, the history and use of the sword and guidon, and the care and display of national and organizational colors are all discussed in some detail. There is also a chapter on exhibition drill for show and for fun.

Part Four deals with marksmanship and weapons. The rifle and the pistol are tools of the military trade, and as such it is necessary that every cadet leader be familiar with the weapons and have a basic understanding of the mechanical systems involved in these two weapons. The mechanical skill learned in the handling of the weapons, and the marksmanship training, are useful in unit competitions.

And that is just an outline of the year to come. It is obvious that there is much to be learned in the field of leadership, and only part of that information can be gotten from any text. The real emphasis must be on the individual cadet, on practical application in the art of leadership. So as you read, think not of words, but of people, for it is the leader's relations with others that prove how well he has learned.

TABLES OF CONTENTS

Page

PART ONE: LEADERSHIP

Chapter

1. Psychology for Leadership 5
2. Leadership and Group Dynamics 17
3. Leadership Principles 31
4. Indicators of Leadership 41
5. Developing Human Relations Skills 49
6. Communication Skills 57
7. Military Instruction 81
8. Problem Solving 106
9. The Role of the Officer 114

PART TWO: MILITARY ORIENTATION AND ORGANIZATION

Chapter

10. Marine Corps Mission and Organization 121
11. Support From the Sky 135
12. Halt! Who Is There 158
13. To Maintain Order 164
14. Land Navigation 169
15. Orienteering 197

PART THREE: DRILL AND CEREMONIES

Chapter

16. Front and Center 219
17. Sword and Guidon 233
18. March on the Colors 248
19. Exhibition Drill 260

PART FOUR: INDIVIDUAL WEAPONS

Chapter

20. The M–14 271
21. The Sidearm 280

LEADERSHIP IN ACTION

PART ONE

LEADERSHIP

2

BREVET BRIGADIER GENERAL COMMANDANT ARCHIBALD HENDERSON, USMC

General Henderson, the fifth commandant of the Marine Corps, served that post for 38 years, from 1821 to 1859, and was the first commandant to be a general. Archibald Henderson had the longest tenure of any commandant, but he is noted for more than longevity. As are many experienced Marines, Henderson was a master of psychology; he inherited a Marine Corps in sad condition, saw the cause of the Corps' poor morale in the attitudes of the men in the Corps and of the public, and took immediate remedial action. Beginning as a new commander, Gen Henderson personally took inventory of his men, equipment, and posts, and saw that no one seemed to care, except him. Knowing men, he knew that pride would have to come from within the men. Understanding the public mind, he knew that in order to get what he needed to build a strong Corps he would have to cause his men to build the reputation of the Marine Corps. Most of all, the General knew that men wanted security, recognition, and adventure. So he went to work to improve the pay and welfare of Marines; he led the Corps to serve the nation in such a way that the reputation and image of the Corps and all its members denoted proud service, and he engaged his Marines in travel and adventure from the swamps of Florida to the jungles and plains of Mexico. The respect and cooperation he received from the Secretary of the Navy furthered the cause of his Marines. Further, Gen Henderson was honored and respected by his Marines, who knew that Archibald Henderson practiced personal leadership, and insisted that all Marine officers do the same. General Archibald Henderson understood men, and he saw the Marine Corps grow in strength and pride because he applied this understanding to leading.

CHAPTER 1

PSYCHOLOGY FOR LEADERSHIP

Until very recently leadership education focused on studying the qualities a leader should possess, but the study of leadership has now shifted to understanding those who are being led. The results of studies being made in human relations are now being applied in the military as well as the business world. The present emphasis is on the conditions under which the leader can cause individuals working as a group or alone to exert maximum effort to get the job done, whether it be filing correspondence, writing reports, maintaining aircraft, or doing research. A knowledge of human nature has become a prerequisite for becoming an effective leader. Today's leaders must know the answers to such questions as: "What causes an individual to exert his best effort?" "How can individual energies be molded into an effective team effort?", "Under what conditions does the individual find satisfaction and happiness in his work?".

Psychology for leadership deals with understanding the interactions between people that are necessary to influence those being led. It must include an understanding of the needs, desires, and behavior patterns of individuals; and why needs, desires, and patterns of behavior change. It must include an understanding of how factors such as anxieties, hostilities, and group thinking influence the leader and the individuals who make up the group. Obviously this subject involves a broader range of study than we can cover in one short chapter, but there is much outside material for those who desire and have the will to research and study on their own. This chapter, however, is limited to a discussion of (1) the basic human needs that serve to motivate people to behave in certain predictable ways, (2) the frustrations that occur when these needs are not met and (3) the adjustments that individuals make to compensate for their failure to meet their physical and social needs. An understanding of these three elements of psychology for leadership will help you to develop the human relations skills that you will learn and put into practice as a Marine Corps Junior ROTC cadet.

NATURE OF THE INDIVIDUAL

The individual is composed of many cells combined into a variety of organs which work to keep him alive and functioning. All of his behavior is the result of the functioning of these organs, whether it be a physical action or a thought process. What are some of the things we know about the individual?

The human species is capable of a wide range of activities. Some of us can perform tremendous physical feats, such as running a mile in less than four minutes or jumping more than seven feet high. We can love, hate, laugh, cry, think, reason, and react to

music or other people. We also have some limitations that go along with our capabilities. We cannot go for an unlimited time without food and liquid. We need oxygen for changing this food into energy, and we must have systems to eliminate waste. We cannot survive for long against excessive fevers, nor can we continue to live through radical temperature changes without some means of protection. There are many physical needs that are necessary for our survival.

We also have some other human needs which we call personal-social needs. These are needs that are related to our growing up and living in society. Some examples of these personal-social needs are the needs for love, feelings of success, being well thought of, and belonging. These needs are necessary in some measure for each of us to function properly.

These physical and personal-social conditions are described by different authorities as needs, wants, desires, drives, or urges. These terms may be used interchangeably so long as they have the following characteristics. (1) A frustrated state results when a need is not satisfied. (2) The need is associated with a goal or something that will satisfy it. (3) The need tends to pull together and actuate the internal energies of the body. (4) The need directs man-controlled actions toward whatever is required to satisfy it. (5) The longer the need remains unsatisfied, the stronger it gets. (6) The stirred-up condition will go back to a normal state as soon as the need is satisfied.

HUMAN NEEDS AS MOTIVATORS

These physical and personal-social needs may be considered as the motivators which cause people to behave in certain, predictable ways. The way these needs are met will influence the way one person will behave toward another person.

These human needs are complex and interrelated. Authorities do not agree on their exact classification or relative importance, but there are four kinds of needs that are of particular importance in motivating men. These are the needs for:

SECURITY
ACCEPTANCE
RECOGNITION
ADVENTURE AND SELF FULFILLMENT

SECURITY

People need to feel safe. They need to feel that they will have enough to eat, warm clothes to wear, and a safe shelter to protect them from the weather. In childhood these needs are provided by parents and the family. There is security in the family group. In adulthood these needs are the motivators that cause a man to work to supply the wants of his family.

The need for physical security is the desire to live—to live in safety and relative comfort, free from hunger, harm, or fear. Hunger alone can cause a person to behave in a way that he might not if he had plenty of food. Hunger can drive a man to steal food, or force him into some other behavior that is not socially acceptable. Survival training teaches us to eat plants and animals that we would not normally eat at home. If a man is hungry enough, snakes and insects become acceptable food.

Many men will run grave risks to gain greater security for the future. Wars have been fought in the name of security. The United States entered

World War I to "make the world safe for democracy." The driving force behind many men who seek financial success is their desire to accumulate an adequate reserve of wealth to secure food, shelter, and clothing for future security.

The well-adjusted person is not too much concerned for his security. The fulfillment of his security needs is taken more or less for granted. He accepts and looks on society as being orderly, stable, and predictable. His security needs become a motivating force only when some event takes place that seriously threatens or endangers his security.

The leader who recognizes this need for security will be the leader who is concerned for the welfare of his men. He will show genuine interest in people who work for him or with him. He will take the time to get to know about them and their families. He will want to know if they have problems, and will be ready to lend advice or assistance. This concern for the welfare of others works wonders in building loyalty.

ACCEPTANCE

The human need for acceptance is a very personal need. A person wants to be accepted not for public prestige, but for the satisfaction of being wanted and belonging to a group.

The need for acceptance falls into two categories. The first category deals with the need for love and affection and is expressed in the individual's behavior toward parents, family or sweetheart. This is a very intimate behavior and involves the sharing of life and possessions with others.

The second category involves the relationship of an individual with other individuals as members of a group. The individual wants to identify himself with and be accepted by those with whom he works, plays, or associates. A person wants to belong to a group of people that he knows well, respects, and feels are important. He also wants them to know and respect him and think he is important to the group. He likes to think that others like to have him around and will accept him just as he is, faults and all.

A person's behavior is influenced by this desire to be accepted by the group. He will try to avoid doing anything that he thinks will make the group dislike him. He will try to do things that will make him important to the group. In other words, he will tend to behave the way he thinks the group wants him to behave. This is the basis for cooperation and teamwork. When all members of a group have this feeling of belonging and being wanted, it is easier to get the group to work for a common goal. The group will no longer act as a collection of individuals, but will assume a personality of its own. As new members join the group, they will be influenced by the personality of the group. An effective leader sees this need to belong and be accepted as a means to build group spirit and cohesiveness. He will promote activities to enhance esprit de corps and feelings of mutual trust and confidence between group members. He will also be alert for influences that might disrupt this unity and will take steps to maintain good relations within the group.

RECOGNITION

The need for recognition goes beyond the need for acceptance and belonging. The individual not only wants to belong and be accepted, he wants to be recognized for some talent or accomplishment. There is satisfaction in

achieving something worthwhile, but the personal pleasure is much greater when the accomplishment is recognized and applauded by others. Satisfaction of the need for recognition leads to feelings of self-confidence, strength, and personal worth.

A person needs to feel that he is important, that his life is meaningful, and that he is respected for his worth or accomplishments. That is why we get satisfaction from seeing our name or picture in the newspaper. Man's ability to think and evaluate allows him to make comparisons between himself and others in his group. He is able to create a mental image of what others think of him, and he wants to be considered important in the eyes of his fellow man. A person will go to great lengths to gain recognition. You are familiar with the "show-off" who wants to be the center of attention or the "clown" who always tries to be funny. Such persons are merely looking for recognition. People who are always trying so hard to gain recognition are usually the people who have an unfavorable image of themselves. Therefore, they resort to unusual behavior to make people notice them and give them recognition.

Many people who commit crimes, especially the spectacular ones, are seeking recognition as much as money or loot. That is why most criminals are caught sooner or later. They are compelled to boast about their exploits. This is their way of gaining recognition.

Some people even try to get recognition by pretending they don't want any. Before a recent Super Bowl football game, one star player became the center of attention of sportswriters who were covering the practice sessions in search of stories or statements from the players. This player, who was expected to be a key man in the upcoming game, showed up at the interview session that preceeded the practice, but he refused to say a word! He ignored every question put to him by the reporters for the entire 20-minute period. The next day his picture was in newspapers from coast to coast. Writers wrote more about what he didn't say than about what any of the other players did say.

All of us are hungry for recognition, and we tend to be happy and appreciative when we receive it. People who are knowledgeable in human relations skills know that the best way to gain recognition is to give it. The successful leader does not take credit for all the accomplishments of his group. He gives credit and recognition to the members of the group whenever he can. He knows that people will work harder and longer when they know that what they do is appreciated. By giving credit to individuals in the group, the leader will not only create a happier and more productive group, he will himself be recognized as an inspiring leader.

ADVENTURE AND SELF FULFILLMENT

The need for adventure is the desire to try new experiences. Man's natural curiosity makes him want to try new and different things. Some people feel this need more strongly than others. While one man may be content to live in the same community and keep the same job for the rest of his life, another might need to try the challenge of new and strange places and different or more interesting jobs. Related to this is the need for personal accomplishment or fulfillment. Some people satisfy this need in their work. Others get a feeling of fulfillment through hobbies such as painting, music, mountain climbing, or some other activity that offers a challenge or an opportunity to be creative. People need to be able to do something

that they can point to and say, "I did that." Because most of the things we need today are made or processed by machines, there are not many jobs that give a person the satisfaction of making something that he can see and touch, something he can point to with pride of craftsmanship. That is why many people take up hobbies that involve doing something with their hands.

The need for adventure and self-fulfillment can drive an individual to higher levels of attainment. A person can satisfy his needs for security, acceptance, and recognition, and yet feel he must reach greater heights to build up his own feelings of worth and self-respect. It is here that the individual approaches his fullest potential. A wise leader will be aware of this need for adventure and self-fulfillment in himself and in others. He will not only seek new challenges himself, he will look for those in his group who are looking for challenges and responsibility. He will use their desire for adventure as a means to inspire them to greater accomplishments and deeper satisfactions. He will also give them opportunities for self-fulfillment through responsibility.

These needs, whether physical or social, serve as motivating forces that result in behavior. They seldom occur one at a time; therefore a person's motivated behavior will be that which makes him try to satisfy all of them that are present at a given time. If so many needs exist that he cannot satisfy all of them at once, he will try to satisfy as many as possible, with the strongest ones getting the most attention.

Much behavior in satisfying needs will involve making choices. For example, you may choose to save money for college rather than spend it for a car or some other luxury. The medical student chooses to go through long hours of study, research, and laboratory work to attain the goal of being a medical doctor. A person may choose a career of public service over a career that might promise more financial rewards. In each case, the individual makes a choice based on the strength of certain needs and behaves accordingly. His behavior is based on the strength of these needs.

FRUSTRATION AND ADJUSTMENT

There are many barriers that can stand in the way of fulfillment of these needs of the individual. Psychologists call these barriers *frustrations*. Frustration may be defined as an emotional disorganization in an individual which results from failure to solve a problem or to satisfy a need. The greater the problem or need, the greater the frustration. However, people differ in the degree to which these failures will affect or frustrate them. Usually a person accustomed to having his way suffers greater frustrations than one who is accustomed to "giving up" to others.

Whenever a person fails in his attempt to fulfill a need that is important to him, he must find some reason for his failure. He must have some kind of mental escape. He must adjust his thinking to account for his failure. The methods that people use to account for their failures are called *adjustments*.

When adjustments are used wisely, they act as a safety valve for our system and provide a means to release the tension that accompanies frustration. However, if an individual gets into the habit of relaying on adjustive mechanisms rather than positive action to meet his needs, the adjustments can become detrimental rather than beneficial. Some of the most common forms

of adjustments are discussed in the following paragraphs.

Rationalization. One of the ways a person adjusts to frustration of his needs is rationalization. If a person fails in the attainment of a goal, he may tell himself that he didn't really want to attain it anyway. For example, if he ran for a class office and was defeated, he might tell himself that he was glad he was not elected, because he really didn't have the time to spend doing the extra work that would be required. He will usually do this subconsciously, but sometimes he will express his rationalization verbally.

Identification. When a person adjusts to frustration by getting satisfaction from the successful attainments of others, he is adjusting by identification. Children identify themselves with their parents, brothers or sisters, characters in the movies or on television, or someone else they believe to be important. To be identified with successful activities, adults join clubs, fraternities, churches, military services, or civic organizations. They may work hard within these organizations promoting worthwhile projects. The good citizen identifies himself with his city, state, or nation and develops loyalty to them. Another source of satisfaction may be gained through identification with material things, such as an automobile, clothes, jewelry, a home, or a bank account.

Hero worship is a kind of identification. The hero worshipper substitutes the accomplishments of his hero for his own. He shares the joy of his hero's successes and the agony of his defeats. He may even try to dress and act like the person with whom he identifies.

Many people limit their own goals because they are afraid of failure, but are happy to assist another in his quest for higher goals. That way they can share the success of the other person without sharing the risk of failure.

Positive identification is a valuable means of making wholesome adjustments and serves as a powerful force in the formation of personality and character. Healthy identification with worthwhile individuals or groups can be a source of satisfaction and can help the individual gain feelings of confidence and adequacy. Every well balanced person uses this adjustive mechanism, but if a person depends too much on identification he tends to lose his own identity and the need to exert himself.

Aggression. This is a common form of adjustment. When a person does not feel accepted, he may have a tendency to strike out or fight back at those who reject him or his ideas. This kind of adjustment may be expressed by physical violence, harsh words, or gestures. Sometimes a person will aim his aggressions not at the source of his frustration, but at his family or friends. A person may behave aggressively in response to an imagined rejection. If the group does not accept what he thinks is a good suggestion, he might think they rejected his ideas because they didn't like him personally. War is an extreme kind of aggression which often results when a nation feels its security is threatened.

These feelings of aggression are natural responses, and we all suffer them from time to time. But in our society there are restrictions on how we can express our aggressions. If every disagreement resulted in physical violence, we would have little time to conduct the necessary business of a civilized society. In our society well adjusted people find more acceptable ways to release the tensions that result from these feelings of aggression. Some people throw themselves more vigorously into their work. Other find re-

lease in sports or other vigorous physical activity. The perceptive leader will find means to channel these aggressions into productive effort.

Compensation. Compensation is the substitution of another goal for the one that could not be achieved. If a person fails to make the football team because of size, ability, or some injury, he might adjust to his frustration by devoting his energy to supporting the team as an equipment manager or cheerleader. Compensation of this sort can be a healthy form of adjustment if it helps a person to put his own unique abilities to their best use.

Withdrawal. When faced with difficult, dreaded, or distressing situations, some individuals find it easier to withdraw to other surroundings. This adjustive mechanism does not require as much energy as aggression or compensation. In withdrawal the individual merely removes himself from the scene of conflict and retreats to other surroundings where satisfaction can be gained in less harsh or strenuous ways. Withdrawal can be characterized in a number of ways, such as daydreaming, use of drugs or alcohol, shunning social activities, or escaping into less competitive activities.

In withdrawal through daydreaming, the person imagines a situation where his goals have been met. A person who has failed to make the varsity team may imagine himself scoring touchdowns or hitting home runs for a professional team. Everyone daydreams at one time or another, but when a person resorts to excessive daydreaming, he is just putting additional barriers in the way of satisfying his needs. It is important to keep in touch with reality and not live in a world of fantasy.

Projection. Projection is placing the blame for failure or frustration on someone else. If a student fails his algebra examination, he may project the blame on his teacher by telling himself his teacher did not explain the subject well or would not give him special attention. He is transferring his feeling of frustration or failure to the teacher.

The adjustments discussed here are only a few of the many mechanisms we use to handle our frustrations. Their use is a normal part of human behavior. Every person uses them. If they are not used to excess, they protect the individual from many stresses. Their proper use tends to preserve normality and mental health. Although the adjustment mechanisms are listed separately, we are likely to use a number of them in any behavior pattern. For example, a person may use projection and then rationalize to support it.

Understanding the nature of frustration and adjustment helps us to discover why we behave in certain ways. Knowing this, we are able to create situations and conditions that not only make us more productive ourselves, but enable us to influence the behavior of others in a positive way.

SUMMARY

We have discussed briefly the nature of the individual, showing how his behavior is motivated by his efforts to reach goals that will satisfy his needs. We have also seen how the individual may react when his needs are frustrated, or blocked. How does this apply to the study of leadership?

Leadership is the art of influencing individuals to perform as a team to accomplish a common goal. It is a two-way process that requires instilling in others a desire and willingness and getting back in return a cooperative effort. A knowledge of what motivates the individual and what makes him behave in a particular way helps the

leader to create those situations and conditions that will stimulate the individual to constructive action toward the group goals. He will at the same time help the individual to overcome his frustrations through the satisfactions that come from accomplishment, achievement, and recognition.

PASS IN REVIEW

Historically man's most productive, and most frustrating, study has been of man himself. In our modern, technological age man is often compared to a machine, but he is much too complex to be considered a machine. A machine, for instance, has an on-off switch to start and stop; you add fuel to a machine and the rate of production generally increases in direct ratio to the amount of power. Man has no switches, and the ratio between power and production is by no means constant. Some men are self-motivated; others work only when pushed. The key to man's intricate mechanism is found buried within the mental makeup of the individual. No leader can hope to know all about everyone in his group, but understanding some common factors in people as a whole can cause a leader to begin to understand his men, and thus to more effectively guide them to useful production for themselves and their group.

a. Do all persons have the same needs?

b. Describe how physical needs and personal-social needs are reated.

c. Which of the four needs discussed is dominant in the average person?

d. Relate the term "esprit-de-corps" to the basic human needs.

e. What are the most common adjustments used by students today—how are these adjustments related to typical frustrations of the modern student?

f. How can a leader use man's need for recognition to obtain a greater effort from his group?

14

MAJOR GENERAL JOHN A. LEJEUNE, USMC

John Lejeune was a graduate of Louisiana State University, and of the U.S. Naval Academy. Entering the Marine Corps as a second lieutenant in 1890, he became the thirteenth commandant and served in that post from 1920 to 1929. After 39 years in the Marine Corps Gen Lejeune retired and assumed the post of superintendent of the Virginia Military Institute, serving in that position until 1937. For nearly half a century John Lejeune participated in military groups as a leader. He exemplifies the leader who constantly practiced the management of group dynamics long before the term was in vogue. The concepts of group dynamics—a sense of belonging, identification with a group in order to share in the recognition the group receives—were practiced by Lejeune throughout his career. In his many duties, aboard ship, in barracks, in combat in South America and Mexico, and as commander of an Army division in WW I, Gen Lejeune gave consistent direction to his group of men, leading them to accomplish difficult missions with ease. As troop leader, as commandant, and as superintendent of cadets John Lejeune influenced the lives of those who served under him. He recognized the needs of his men and influenced the forces which affected them to weld his men into a strong and effective team. In so doing he inspired those who followed him; he motivated his men and instilled in them a sense of pride in their service. An able officer and a distinguished leader, John A. Lejeune demonstrated his knowledge of the interrelationships of groups of men, and he provided them with the necessary guidance to achieve superior performance in the most difficult situations.

CHAPTER 2

LEADERSHIP AND GROUP DYNAMICS

In recent years social scientists have done more and more research in the area of group behavior. This research is aimed at learning how and why groups behave as they do. In Chapter 1 we discussed the individual and how and why he may behave in a particular way because of certain needs and desires. When individuals are brought together in a group situation, those individual needs take on a new dimension. Each person in the group is no longer influenced only by his own personal and private needs, but he is also influenced by the needs and behavior of others in the group. This mixture of needs and behavior in the group creates a very complex and dynamic force. Because leadership functions in a group situation (if only a group of two), the leader must have a working knowledge of group dynamics if he is to effectively and positively influence the group. In this chapter we will discuss the nature of groups, their behavior, and how the leader can use his knowledge of group dynamics to mold an effective group.

There is no set of rules or formula to be applied to a group of individuals that will immediately result in effective group effort. All groups do not have the same objectives. Neither are they composed of individuals with the same ideas, aptitudes, likes, or dislikes.

Scientific study of the psychological factors of group behavior is relatively new, but already the results of such study are being used by leaders in influencing subordinates in many areas of business, government, the military, and even in sports. Such questions are being asked as, "What factors cause better teamwork?", and "What makes a mediocre team defeat a much higher rated team on a given day?". Coaches being interviewed prior to a game are always asked, "Is your team ready for this game?". The question does not refer to the physical strength of the individual members of the team, but to the mental attitude of each member and the team as a whole. Coaches being interviewed following the loss of a game often say that their team was not "up" for the game—that is, they were not sufficiently motivated to give their best effort. Leaders in every field are looking for ways to motivate workers, salesmen, students, athletes, and soldiers. The study of group dynamics is aimed at helping the leader to discover new ways not only to motivate men, but to do it in a way that will provide satisfaction and happiness to those being led.

THE NATURE OF GROUPS

The word "group" when used in reference to people means two or more individuals who have common purposes or characteristics. It implies that the specific members interact and affect each other. Through interaction the members of the group become acquainted with each other, and the group develops a personality of its

own. The use of the "I" gradually changes to "we," and the group starts functioning more as a team with a common purpose.

What actually takes place in this gradual process? True functioning groups are found only when each member gains satisfaction from his membership in the group. The use of the word "we" indicates that satisfaction is being gained and the individual is identifying himself with the group. Thus, in understanding the nature of a group, we must refer to our knowledge of human behavior to find out which individual needs can be satisfied by belonging to a group.

Security Through Belonging. It is difficult for an individual to objectively analyze and explain his actions. If a person wears his hair long, it might be difficult for him to tell why. He might just like it that way, or perhaps his girlfriend likes it that way. But more than likely, it is because of the influence of the group with which he associates. Group thinking influences social behavior and plays an important role in controlling the general way of life for most of us. It is one of the main controls of social behavior.

Individuals have a desire to be identified with others. This desire could be caused by common interests or goals, or by man's gregarious nature. Individuals seem to gain a certain amount of security through having a set relationship with others. An individual may belong to several groups at once—the family, a lodge, a fraternity, and a social club. The reason he belongs to all of these organizations is that membership in each group promises to satisfy some of his needs.

Belonging gives us a feeling of having status, of having a definite purpose or role in the group. It may be a major role or a minor role, but this does not seem to matter. The important thing is that there is a defined place or role in the group. Who is who? What is one's place? How long will the place last? How can one rise in the group? The answers to these questions are important aspects of belonging. They let us know where we stand in relation to those around us. This defined place or role gives us the security of having something stable to work from.

Fulfills the Need for Recognition. All individuals seek status; for this status to be of value to him it must be recognized by others. Through membership in various groups the individual is seeking a means of gaining some recognition.

The status of an individual is actually a matter of how he feels about his place in the group. This does not mean that everyone, to have status, wants to be boss, the president, or the supervisor. Status depends on what the individual thinks about his role or place in the group and on how he defines success for himself in his role. Some individuals prefer a place that is in the limelight, while others prefer the obscure or insignificant role. In other words, each individual has a certain place, status, or role that he prefers and that he wants other people to accept and recognize as his.

An individual may gain feelings of esteem from the status of the group to which he belongs. If the group is well thought of, accomplishes many worthwhile goals, and is looked upon as a group with merit, it brings credit to its members. The Marine Corps has long used this means of satisfying individual esteem needs through the prestige of the group. There is nothing wrong with this method, for it serves as a strong motivating force. Unit citations, honors, and commendations all accomplish the same things, for individuals like to belong to groups they are proud of.

Satisfaction of Other Needs. The belonging and recognition needs are not the only needs that may be satisfied through group activities. The individual may join a group for several reasons. The physician may join a medical society to have access to the latest medical information. The laborer may join a union because he believes his economic status will be improved. The owner of a downtown business may join one of the city's civic organizations to bring him in contact with the public and other businessmen. Some groups exist solely because individual needs can best be satisfied through united effort. The group that promises satisfaction of more than one need is going to be more attractive than one which offers satisfaction of only a single need.

The group and its activities are very important to the individual in the military service. The change from civilian to military life means learning to live and get along in a new society. The needs that were satisfied through a variety of civilian activities are suddenly blocked because those activities are no longer available. The avenue that is open for the individual to gain some satisfaction is through association with the other members of his group. In military service this association can be much closer than in civilian life, for a military unit may be thrown together with no other contacts for an extended time.

Identification with the Group. This is probably the secret of building successful teams. We know that individuals join or identify with a group because the association promises to pay off in satisfying some deep-rooted needs. These needs must be satisfied by and through the group to cause the individual to whole-heartedly identify with it. On the other hand, the group must benefit from the identification of its members. This means that accomplishing the group's mission is a responsibility of all group members. Another important aspect is that group identification must be satisfying to all members rather than just a selected few. There is no surer way of losing group members and the effectiveness of the group than by favoring a selected few. The group is not a team until *all* members start identifying themselves with it.

Individuals who are effectively identified with the group and its objectives will show this identification by boasting about or showing pride in belonging to the group. The individual who shows this feeling for the group is accepting group success or failure as his own success or failure. On the other hand, some individuals become so strongly identified with the group that they think the group can do no wrong. In this case the individual may become overly dependent on the group and look on those outside as being its enemies. A healthy degree of identification with the group is essential, but not to the extent that the individual loses his own identity.

GROUP DYNAMICS

Group dynamics are those forces that result from the interaction of group members among themselves and between the group and the environment in which the group exists. Those forces within the group may be called internal dynamics. Those forces arising from interaction of the group with its environment may be called external dynamics.

INTERNAL DYNAMICS

The internal dynamics of a group includes those actions resulting from the

communication and participation patterns within the group. The behavior and performance of the group is also influenced by such factors as group atmosphere, group standards, group identity, and group spirit.

Communication Patterns. Communication within the group is absolutely essential for effective group functioning. Communication is necessary to provide the information needed to accomplish the group task. Without communication there can be no coordination or cooperation, and there would be no means to develop group attitudes and spirit. Communication is the primary process of group dynamics.

There are many ways by which people in a group communicate. In a formal group there may be established channels of communication, such as the "chain of command" in a military organization. In a democratic group the patterns of communication are more informal. In either case the leader of a group must be at the center of the group communications network. He must be in a position where he can not only direct communications downward to members of the group, but also receive communication coming up from the group. This two-way communication between the leader and the group is necessary for a number of reasons. First, the two-way exchange of communication enables the leader to determine from the "feedback" from the group whether his ideas or instructions have been clearly received and understood by the group. It also provides a means for group members to contribute their ideas and suggestions to the leader. If this upward channel of communication is left open and subordinates are encouraged to use it, many good ideas will originate from the people who are in the best position to recommend changes that will increase efficiency at the working level of the group process. This upward communication also provides a means for subordinates to "let off steam" or to get problems and gripes off their chest. It is not enough, however, to merely leave the door open to upward communication. The leader must actively encourage and solicit ideas, suggestions, and gripes from members of the group. He can do this through informal discussions with subordinates or by more formal means such as suggestion boxes, or incentives or rewards systems. However he does it he must create an atmosphere wherein members of the group are encouraged and will feel free to make their ideas known.

Another important communication pattern that exists in all groups is what is known as the "grapevine." This is a term that originated during the Civil War when telegraph wires were often laid in tangled, crisscross patterns that somewhat resembled grapevines. Infantrymen would often tap these telegraph lines in an attempt to get some information about what was going on at the upper echelons of command. This unofficial information was, of course, widely disseminated and was said to come from the "grapevine." The expression today has come to mean any unofficial information that is passed among the members of a group. This information consists of a combination of facts and rumors, but studies of the grapevines of major organizations has shown the information to be highly accurate and reliable. In some cases this information has proven to be 80 to 90 percent accurate. The reason for the reliability of such communication between group members is due in part to the informal atmosphere in which it is transmitted. Since the information is usually passed among friends, it is received in an atmosphere of trust and confidence. This informality helps to avoid some of the

psychological blocks that interfere with communication between subordinates and seniors. Because this information is usually something of specific interest to the group, they tend to be receptive to the information and are more likely to remember it and pass it on just as they heard it. Problems arise, however, when the grapevine starts to circulate rumors. Rumors tend to spring up anytime there is a lack of factual information about things that are of vital interest to the group. To prevent the spread of rumors, the leader must keep the grapevine supplied with facts. When the group knows the truth about a situation of interest to them, they have no need or desire to spread rumors.

Rather than look at the grapevine as a nuisance, the leader should use it to the advantage of effective group communication. He can learn through the grapevine who the informal leaders of various sub-groups are, and through them he can use the grapevine to gain information that might not be available to him through other means. He can also use it to disseminate messages that might be better received in the informal atmosphere of the grapevine.

Participation Patterns. In the group situation it is impossible for every member to participate to the same degree. The varying interests, aptitudes, and talents of the individual members will largely dictate the participation pattern of a particular group. If the group is left to find its own pattern without direction from group leadership, some unfavorable patterns may develop. Some members will tend to overparticipate and dominate the group. Others may fail to participate at all without some stimulus from within the group. In a group discussion, for example, a few members might try to do all the talking, thus depriving others of an opportunity to contribute to the discussion. Frequently a discussion will not bring out what various members might be able to contribute. It is the leader's duty to draw out ideas and opinions from all of the group. He must realize that all members have something to contribute, but it is sometimes necessary to encourage participation by those who are shy or reluctant to speak for fear of ridicule.

The leader's participation will also have a considerable influence on the participation pattern of the group. If he is autocratic and authoritarian to the degree that he makes all decisions on his own without seeking the advice and assistance of others, the other members will soon cease to participate in the decision making process at all. This could also affect their attitude toward the group and its goals. A much better situation is created within the group when the leader draws upon the varied talents that are available in the group. This makes the group aware of its talents, skills, and other resources, and enhances the feelings of worth of individual members.

Group Standards. A common characteristic of all groups is the adoption of group standards. That is the code of operation or behavior that the group adopts in a particular situation. It is a collective sense of responsibility that the group has about how it carries out its work. Sometimes a group's stated standards may not agree with what is the actual practice. For instance, a new cadet joins the unit and is told that he must maintain a neat appearance, with shined shoes, a proper uniform, and a neat haircut. For a few weeks he comes to school that way, but he notices that other cadets have unshined shoes, unpressed uniforms, and long hair, and nothing is said about it. Soon the new cadet is coming to school with unshined shoes and an otherwise unkempt appearance. He has adapted him-

self to the true group standards, which he found to be different from the ones that had been stated him when he joined the unit.

It is the responsibility of the leader to help the group to set standards for acceptable performance. It is not enough just to aim for high standards. Group standards should be well defined so that each member knows what is expected of him. They should also be realistic. If stated standards are so high that they are impossible for the majority of the group to maintain, they will lead only to frustration and dissatisfaction. Group standards should also be consistent and not change at the whim of group leaders, and they should apply to all members of the group. The example that is set by leaders of the group will in the long run have a greater influence on setting the true standards of the group than any formal statement of ideals or aims.

Group Solidarity. Another characteristic of groups is that of group solidarity or cohesion. This is the tendency for members of a group to stick together. This tendency may be very strong, or it may exist only as a fragile bond, but every group exhibits this characteristic to some degree.

Group solidarity is achieved through a variety of motivations. Some groups may stick together for security or protection. If a group is attacked from outside it comes together more strongly to defend itself from these attacks. An example of this is the story of the Jewish people in Germany under the persecution of Hitler's policy of extermination. As a result of their treatment they developed a solidarity of spirit and determination that had not existed previously among that group.

The goal of the group leader is to develop the kind of group solidarity that will enable members to work together in a cooperative situation in which all members have specific responsibilities and are at the same time interdependent on each other. This kind of solidarity is developed in a number of ways. The first factor in the development of group cohesion is the simple matter of close association. To develop strong emotional ties people have to know each other well, and this can be done only through close association. Close association over a long period of time can develop very strong bonds between group members. The longer a group stays together in an organization, the stronger their feelings of solidarity become. But close association alone is not enough to develop strong bonds among men. It is also necessary for them to have a common purpose. Group purpose and teamwork are essential in building group solidarity.

Another factor that promotes group cohesiveness is common experiences. People who share common experiences develop close identity with each other based on those experiences. These experiences, however, must be satisfying to group members. The sharing of frustrating experiences or failures can break up group solidarity as members leave the group to disassociate themselves from unpleasant experiences. The leader of a group can promote solidarity by providing situations that promote close association through common experiences with a sense of common purpose.

Esprit de Corps. When an organization has a high degree of solidarity and group identity, it is said to have *esprit de corps. Esprit de corps* has a meaning that transcends the literal translation of the words. It is a quality that is found in formal organizations with a strong sense of history, tradition, and heritage, and which offer its members opportunities fo recognition and prestige through mem-

bership. It is characterized by enthusiastic pride and loyalty of members, including the display and use of symbols and slogans that are identified with the group. When a group has high *esprit* it is often capable of performance that far surpasses what would be normally expected. If this quality is highly developed in an organization, it is possible to pass it on from generation to generation in the same organization even though the entire membership will change over a period of years.

EXTERNAL DYNAMICS OF GROUPS

In addition to the internal forces that affect group action and behavior, there are external forces which also have an important influence on the group. These external forces are the factors which affect the group as a whole. Every group exists in some kind of environment. Your Marine Corps Junior ROTC unit exists in the school environment which in turn is part of a larger community. The attitude of your school and community toward your unit will have an effect on the way your unit performs. Your parent organization, the Marine Corps, is another external force that influences your unit. All of these external groups have a certain image of your unit, and they have certain expectations about how you should perform as a group. The Marine Corps expects you to uphold the same high standards of behavior and performance that is expected of all Marines. The school expects you to represent the ethics, standards, and values of the school.

Sometimes there may be conflicts between the expectations of some of these outside influences. For example, the standards of dress, haircuts, and appearance may differ between what the school population expects and what your Marine Instructors expect. Such influence will have an effect on the behavior of the unit and must be considered in understanding its functioning.

Another factor of external group dynamics is the membership of group members in other groups. Members of a group may belong to a number of groups, all of which are competing for the individual's time and energy. Since time is a limited commodity, the individual must make a choice of which group is most important to him. Usually he will choose the group which offers the greatest opportunity to achieve security, acceptance, recognition, and the other basic needs.

No group exists in a vacuum, and group behavior cannot be considered without reference to external forces. The group leader must be aware of these external forces and see that group goals are kept in harmony with the goals of the community in which the group exists.

THE GROUP LEADER

The overall objective of a leader is to motivate his group toward the achievement of their mission or goals. To do this he must create within the group a satisfying social structure. There are several things he can do and a number of techniques he can use to achieve this kind of group situation.

Identify goals. The leader must help the group to identify specific goals so that they will have a clear picture of what they are about to accomplish. If it is a democratic group with goals that are derived by concensus of group opinion, it may be necessary for the group leader to distill some concrete and well defined goals out of the gen-

eralized objectives of the group. If it is an autocratic group with goals or missions assigned by higher authority, the leader must define those goals or missions so that they may be clearly understood by the group and in such a way that the group can identify with the goals and accept them as their own. In either case the achievement of group goals must provide for satisfaction of needs of individual group members. Once the leader has identified the group's goals, his task may be more than half done. Once these goals are defined, the internal forces and energies of a responsive group will move toward their accomplishment.

Give Direction. The leader must give direction to the group effort. A planned procedure is essential for efficient group functioning. This involves management and means establishing an effective and satisfying framework for group action. The plan must be meaningfully communicated to all members for best results. This means letting everyone in on the plan, for individuals need to feel that they are involved in and are an important part of the plan. Even greater satisfaction may be achieved if group members are allowed to participate in the actual planning itself. This participation in the planning enables individual members to select suitable and satisfying roles for themselves and leads to closer identification with the group goals.

Give Consistent Treatment. Consistent treatment of group members creates a secure environment for group members. This means being just and giving to others what they are due in your honest opinion. This is especially important in an autocratic organization like the military. When subordinates know the standard of behavior that is expected of them and the respective rewards and punishments, they will want to abide by that standard, especially when it applies to all members alike. They will feel more secure if they know their rewards and punishments are awarded objectively, based on their behavior, rather than on the leader's whims, moods, or pet preferences. On the other hand, if their treatment is inconsistent, the group members do not know how to behave, and they question their security. Subordinates do not like for the group to be punished for the behavior of the few. It doesn't make sense to upset the whole group to punish a few offenders. The leader who is consistent in his treatment of subordinates will have a minimum of discipline problems.

Create Status. Creating status for the group as well as for the individual is necessary for effective leadership. Recognized successes add great prestige to any group. It makes group members feel proud of their affiliation, and they show this pride in their behavior. All jobs or roles in the group should be considered important, and all group members should be made to see how their efforts, through the group, help to achieve the goals of the group.

As a cadet leader you will have a certain status in your unit. You will be working with cadets of varying ranks. Each individual, no matter what his rank or grade, deserves status in his group. No one wants to be looked upon as a nobody, as unimportant, or as a number. You can help individual cadets to gain and maintain their status by giving recognition for accomplishments, by looking after their welfare, and by showing geniune interest.

The long recommended technique of "praise in public, reprimand in private" still holds true. Public praise gives an individual status, while public reprimand takes his status away from him. However, praise should be deserved and warranted. Undeserved praise may be

worse than no praise at all. A good rule to follow is: When praise comes from without, pass it on to the group or individual, minimizing your part. When the group or a subordinate is censured, accept it as your own responsibility. Shoulder the blame for any group failure. It is the axiom of the military leader that he is responsible for everything his unit does or fails to do.

SUMMARY

Scientific study of group behavior is a relatively new field, but results from such studies are being used by present-day leaders. The word, "group" refers to two or more individuals who have common purposes or characteristics. The behavior of the group is influenced by the interests of its members.

In studying the nature of the group we need to find out which individual needs can be satisfied by belonging to a group. Individuals have a desire to be identified with others, and they like to belong to groups through which they can gain feelings of security, recognition, and status.

There are many internal and external forces working in a group. Some of these forces may work against leadership. It is the leader's responsibility to influence these forces to work for him in achieving the goals of the group.

Getting all members to identify with the group and its objectives is probably the secret of building successful teams. This identification with the group must show promise of paying off by satisfying some of the needs of the individual. The more needs satisfied by and through the group, the stronger the identification will be.

To make group dynamics work for him to achieve group goals, the leader must create a satisfying social structure within his group. He can promote this kind of motivation by identifying goals and giving direction to group activities. He must also give consistent treatment to all group members alike, and create status for individuals and the group as a whole.

PASS IN REVIEW

The term dynamics may be equated to the word force; group dynamics is the sum of the forces which affect group behavior and performance. Some of the forces or pressures are generated within the group; others come from outside the group. The group leader is the one individual who should be most aware of these various forces, for he can most effectively lead if he utilizes the various forces which influence the group to motivate group members. Recognizing the needs of members of the group, and knowing what to do to cause the group to serve individual needs while accomplishing the mission of the group is the leader's most important task.

a. Discuss the relationship of individual motivation and team effort.

b. Which personal needs can be satisfied by team membership?

c. What is the importance of communication within a group?

d. How can a leader use the "grapevine" to his advantage in group communication?

e. How can members of a group influence group standards?

f. List some external forces which affect members of a JROTC unit.

g. What can a leader do to strengthen group esprit which will also serve to motivate the members of the group?

26

FIRST SERGEANT DAN DALY, USMC

Sergeant Daly retired in 1920, with the rank of Sergeant Major, after more than twenty years of highly distinguished service with the Marine Corps. Sgt Daly had the distinction of being one of the three men in history who was awarded two Navy Medals of Honor. He also won the Distinguished Service Cross, but he lives in American military tradition because of what he did, not because of the medals he won. As a private in China and as a gunnery sergeant in Haiti he demonstrated his bravery and dedication; as a first sergeant in Germany he led an assault on German machinegun nests with the cry, "Come on . . . do you want to live forever?". Brave as he was, Sgt Daly had much more than reckless courage in combat, for he was noted as one of the most efficient and respected noncommissioned officers in the Marine Corps. He was a tough disciplinarian, but was popular and respected because he was fairminded and he worked constantly to protect the rights and promote the welfare of those who served under him. He was a real leader who served his mission by knowing his men, caring for them, and causing them to work together. When offered an officer's commission, Daly said, "Any officer can get by on his sergeants. To be a sergeant, you have to know your stuff. I'd rather be an outstanding sergeant than just another officer." SgtMaj Daly certainly knew his "stuff," his job, and he used his knowledge to apply the principles of leadership in such a manner as to become one of the Corps' finest leaders.

LEADERSHIP PRINCIPLES

Principles are rules of conduct that govern action or behavior. Studies of successful leaders have revealed certain rules of conduct that appear to have been a strong influence in their lives. These rules have stood the test of time and have evolved into a set of leadership principles. Learning and applying these principles can help you to avoid much of the trial and error involved in developing good leadership techniques. These principles are general in nature and may be applied in a variety of leadership situations. Ten principles of leadership are listed below with suggested techniques you can use to apply each principle.

1. KNOW YOURSELF AND SEEK SELF IMPROVEMENT. No one can become a successful leader until he knows his own capabilitites and limitations. Evaluate yourself and recognize your own strengths and weaknesses. Strive to develop desirable traits of leadership.

Techniques you can use—

a. Look at yourself objectively to determine your strong and weak personal qualities. Make an effort to overcome your weaknesses and further strengthen your strong qualities.

b. When appropriate, seek the honest opinions of others as to how you can improve your leadership traits.

c. Profit by studying the causes for the success or failure of other leaders, past and present.

d. Develop a genuine interest in people; acquire the human touch. Cultivate friendly relations with others.

e. Take advantage of every opportunity to increase your general and special knowledge. Develop a curiosity and thirst for knowledge that will continue after you are out of school.

f. Master the art of communication by improving your skills in reading, writing, speaking, and listening.

g. Develop a philosophy of life and work. Have a definite goal and a plan to attain it.

2. KNOW YOUR JOB. Whatever job, task, or mission you are assigned, consider it worthy of your best effort and learn as much as you can about how to perform it. Superior performance of routine jobs leads to assignment of tasks with increased responsibility.

Techniques you can use—

a. Understand the purpose or objective of your task and how it relates to work being done by others.

b. Learn not only the general procedures, but all of the little details of a job.

c. Learn all you can about the job of your immediate senior. This will prepare you to take

over in his absence and will demonstrate your competence for advancement.

d. Keep abreast of new developments and use imagination and initiative to find better ways to perform the task at hand.

3. KNOW YOUR SUBORDINATES AND LOOK OUT FOR THEIR WELFARE. By making a conscientious effort to observe and become personally acquainted with your subordinates, you will gain a knowledge of their aptitudes and capabilities. This will help you to employ them more effectively in jobs for which they are best suited. When a person knows that you are interested in him as an individual and are interested in his welfare, he will have a better attitude toward you and a greater desire to follow your leadership.

Techniques you can use—

a. Gain an understanding of basic psychology and human behavior.

b. Show sincere interest in your subordinates and encourage them to discuss their problems with you.

c. Learn the names, family background, capabilities, and limitations of your subordinates.

d. Keep a systematic record of the progress and accomplishments of your subordinates.

e. Give public recognition for superior performance.

f. Censure in private.

g. Avoid showing favoritism.

h. Permit men to explain their mistakes and get the facts on "gripes".

i. See that advancement goes to the most deserving.

4. KEEP YOUR MEN INFORMED. Everyone wants to know what is expected of him and how well he has done. The person who is aware of the group situation and mission is more effective than one who is not. He can better understand what is expected of him when he understands the mission of the group. With this understanding, he can establish his own goals and adjust his behavior to attain the group goal.

Techniques you can use—

a. Explain to your key subordinates why a particular task must be done and how you propose to do it.

b. Make sure that key subordinates inform all the men.

c. Build morale and esprit de corps by making the most of all information concerning successes of the group.

d. Explain policy and procedure changes to your men, giving reasons for them.

5. SET THE EXAMPLE. A group will look to its leader for examples they may follow. Your individual appearance and conduct must inspire respect, pride, and a desire to meet the standards you set. Set the standard for your group by outstanding performance of duty and exemplary conduct. The leader who appears in an unfavorable light before the group destroys the mutual confidence and respect that must exist between a leader and his men.

Techniques you can use—

a. Keep yourself physically fit, mentally alert, well-groomed, and correctly dressed.

b. Conduct your life each day as you would like to see your subordinates conduct their lives. Coarse behavior and vulgarity are the marks of a weak and unstable character.

c. Master your emotions and maintain your self-control. The

leader who is subject to uncontrolled bursts of anger or periods of depression will have a hard time gaining and holding the respect and loyalty of the group.

d. Exercise initiative and promote the spirit of initiative within the group.

e. Maintain an optimistic outlook and display an attitude of confidence. They will be reflected in the attitude of the group.

f. Be morally courageous. Stand by your principles and accept responsibility for your actions. Be willing to accept the responsibility for failures of the group as well as its successes.

g. Share the danger and hardships of the group. Don't put your personal safety and comfort ahead of the welfare of the group.

6. BE SURE THAT THE TASK IS UNDERSTOOD, SUPERVISED, AND ACCOMPLISHED. Give clear, concise instructions, then supervise to make sure the instructions are promptly carried out. Men will respond more quickly to instructions or orders which are clear, concise, and easily understood. On the other hand, they may become confused if you try to give too many details. Supervision is necessary to make sure the task is done properly, but too much supervision is sometimes worse than not enough. Individual initiative is developed when subordinates are allowed to use their imagination in devoloping their own techniques for accomplishment of tasks or missions.

Techniques you can use—

a. Give clear, complete instructions, taking time to explain and answer questions when necessary.

b. Give instructions and orders only when needed. Avoid overdirecting.

c. Check to see that work is progressing on schedule.

d. Refuse to be satisfied with lower quality work than the group is capable of producing.

e. Frequently review procedures and look for better ways to do the job.

7. DEVELOP A SPIRIT OF TEAMWORK WITHIN THE GROUP. Leadership is an interaction between the members of the group and the leaders, and among members of the group. The needs and objectives of the group are more easily achieved if there is a spirit of teamwork within the group. Individual members of the group will perform more effectively if they feel they are part of a team. The group gives its members identity, thereby helping to satisfy the individual needs for recognition. A high level of performance by the group gives the individual members a feeling of accomplishment. The leader who emphasizes teamwork will usually obtain a high level of proficiency.

Techniques you can use—

a. Develop teamwork by showing how each man's job contributes to the total effort.

b. Encourage and carefully consider suggestions by subordinates.

c. Do not play favorites. Resist the temptation to show partiality toward certain individuals without consideration of the effect on others in the group.

d. Encourage friendly competition within the group and with other groups to promote teamwork and strong group feeling.

8. MAKE SOUND AND TIMELY DECISIONS. The leader will often be called upon to make a rapid estimate of the situation and arrive at a decision. He must be able to reason logically under trying conditions and decide quickly what action is necessary to take advantage of opportunities or to handle emergencies as they occur. The ability to make sound and timely decisions is not acquired by accident. It comes from study, training, and proper planning.

Techniques you can use—

a. Carefully and objectively consider available facts before making a decision.

b. Use the scientific problem solving method to arrive at the most logical decision.

c. Plan ahead and try to provide for every event or situation that reasonably can be foreseen.

d. Consider the advice and suggestions of subordinates before making decisions.

e. Consider the effect of your decision on the group.

f. Analyze your decisions to determine why some were good and others bad.

9. EMPLOY YOUR MEN IN ACCORDANCE WITH THEIR CAPABILITIES. You must have a thorough knowledge of the capabilities and limitations of your group if you are to lead them successfully. Assigning tasks that are unreasonable or impossible to perform leads to failure and frustration. Assigning tasks that are not challenging, interesting, or satisfying leads to disinterest and apathy.

Techniques you can use—

a. Judge the capabilities of individuals and the group as a whole.

b. Analyze any task you assign in relation to the capabilities of the group.

c. Try to assign people to jobs which fit their specific talents.

d. Make every effort to assign tasks fairly among members of the group. Do not put all of the work on the most willing workers.

e. Inspire the group to perform to the full extent of its capabilities. Do not settle for half-hearted effort.

f. Assign inexperienced personnel to work with more experienced personnel so that they may learn by example.

10. SEEK RESPONSIBILITY AND BE RESPONSIBLE FOR YOUR ACTIONS. In the absence of instructions or orders, you must take the initiative. By seeking responsibility, you develop confidence and increase your leadership ability. Accept responsibility for all your group does or fails to do. The leader who fails to accept responsibility will lose the confidence of his men.

Techniques you can use—

a. Look for ways to do the job efficiently instead of looking for reasons why you should not do it.

b. Know the duties and responsibilities of your immediate senior and be prepared to accept his responsibilities.

c. Take advantage of any opportunity that offers increased responsibility.

d. Perform every task, large or small, to the best of your ability. Your reward will be increased opportunity to perform bigger and more important tasks.

e. Accept just criticism. Admit mistakes, analyze the cause, and make corrections gracefully.

f. Adhere to what you know to be right; have the courage of your convictions.

LEADERSHIP PRINCIPLES

1. Know yourself and seek self improvement.
2. Know your job.
3. Know your subordinates and look out for their welfare.
4. Keep your men informed.
5. Set the example.
6. Be sure that the task is understood, supervised, and accomplished.
7. Develop a spirit of teamwork within the group.
8. Make sound and timely decisions.
9. Employ men in accordance with their capabilities.
10. Seek responsibility and be responsible for your actions.

PASS IN REVIEW

Your English teacher and your principal, your father and the mayor all have something in common with each other and with you—all these people exercise leadership. Each one leads a different group, in a different situation, but each practices leadership in his or her own way. The ten principles of leadership discussed in this chapter are as applicable to the football field as to the drill field; they are as useful to the class president as they are to the colonel.

a. Which one of the ten leadership principles is most important?

b. Why is it important for a leader to keep his men informed—how does this improve teamwork?

c. Discuss examples a MCJROTC cadet might set for his fellow students who are not members of JROTC.

d. Is decision making really a problem for a student?

e. Could these principles be applied to your work in your school, church, club or scout group? Explain how this could be done.

34

GENERAL ALEXANDER VANDEGRIFT, USMC

In his 38 years in the Marine Corps, General Vanergrift was a combat leader in Nicaragua, Mexico, and the Pacific islands. He was a commander of troops in China and in the Haitian Constabulary. He was, in short, an experienced leader in every sense of the word, one whose success as a leader was consistently demonstrated in the accomplishments of those he led. The courageous combat proficiency of the Marines who fought in China and in Mexico is familiar to all students of military history; equally noteworthy is the reputation of the Haitian Constabulary, which has been the model for many similar police forces in the Caribbean. Alexander Vandegrift served two tours with the constabulary, first as an advisor and later as an inspector. Much of their proficiency can be directly attributed to the leadership of Vandegrift. The cool, tenacious manner and aggressive drive of Gen Vandegrift served him well during his four years as the Marine Corps' eighteenth commandant. He was at the helm of the Corps in some of its most trying times, the last two years of WW II and the two years following the war, 1944–47. During this period of time the Marine Corps grew to a strength of 475,000 officers and men, and then shrank to a mere 85,000. Vandegrift played an active part in this growth, as commander of the First Marine Division in some of its earliest Pacific island assaults, and as CG of the First Marine Amphibious Corps. The indications that those Marines were well led are myriad; they continually battered the enemy, never failing to accomplish a goal or take an island. Their proficiency, morale, discipline, and esprit de corps during those days of combat has become legendary. Judging Alexander Vandegrift by the behavior of the group of Marines he led in WW II, he was a superior leader. He demonstrated his leadership through the productive accomplishments of his men.

CHAPTER 4

INDICATORS OF LEADERSHIP

It is impossible to measure leadership or judge a leader solely by observation of the leader himself. The real quality of leadership must be judged in relation to the behavior of the group. If an organization is productive, accomplishes its goals, and demonstrates harmony and good human relations, it reflects successful leadership. On the other hand, if it fails to achieve any worthwhile goals or if members are unhappy and dissatified, it is probably because of failure in leadership.

An important responsibility of a military officer is the continuous observation and evaluation of his unit. Successful leaders of business organizations also use some form of evaluation of groups they supervise. These evaluations not only help them to judge the proficiency of individuals, but also give them indications of the effectiveness of their own leadership.

The pilot of an aircraft depends on his instrument panel to keep him informed of the condition of the engines and other vital parts of his aircraft. As long as he gets favorable indications from his instruments, he can be fairly confident that his aircraft is functioning safely and efficiently. By constantly monitoring his instruments he can usually detect problems before they become critical. This enables him of leadership problems, but there are to take action to correct a potentially serious situation.

The leader of a group does not have a set of instruments to warn him other indicators that help him to judge how well his group is performing. These indicators of leadership can be observed in the behavior of the group. The leader who is alert to them has a good means to measure the effectiveness of his group. A knowledge of these leadership indicators will enable you to judge the quality of leadership in your ROTC unit or any other group to which you belong.

CHARACTERISTICS FOR EVALUATION

It would be impossible to list the many possible leadership indicators, but there are certain characteristics that can be observed in groups that have proven to be very reliable in measuring the quality of group leadership. These characteristics are: (1) MORALE, (2) ESPRIT DE CORPS, (3) DISCIPLINE, and (4) PROFICIENCY. Although these indicators were developed for use by military officers, the principles may be applied in any leadership situation. As you study these indicators of leadership, try to think of real situations where you have observed them in action.

When you use these indicators to evaluate your own unit, you may discover problems related to one or more of these indicators, with a consequent decrease in unit effectiveness. Taking steps to solve these problems will be an excellent exercise in practical lead-

ership. Let us examine these indicators of leadership.

MORALE

Morale may be defined as an individual's state of mind. It depends upon his attitude toward everything that affects him—his fellow cadets, his teachers, school, and other things which seem important to him. Morale is closely reated to the satisfying of a man's basic human needs. If the activities of a unit are conducted so as to assist in satisfying the cadets' basic needs, a favorable attitude will be developed. High morale is a positive state of mind which gives the cadet a feeling of confidence and well-being that enables him to face difficult tasks with willingness and determination.

The state of morale in a group does not remain the same; rather, it is constantly changing. The state of morale of the members of your unit is an important index to the effectiveness of unit leadership. You can measure morale by close observation of cadets in their daily activities, by inspections, and by questions and conversations. Specific things to note are:

1. Appearance.
2. Personal conduct.
3. Standards of military courtesy.
4. Care of uniforms and property.
5. Response to orders and directives.
6. Motivation during classes or drill.

ESPRIT DE CORPS

Esprit de corps is the loyalty to, pride in, and enthusiasm for the unit shown by its members. Whereas morale refers to the attitude of individuals, esprit de corps is the unit spirit. It is the common spirit reflected by all members of a unit and provides group solidarity. It implies devotion and loyalty to the unit, a close identification with the unit and with all for which it stands, and a deep regard for the unit's history, traditions, and honor. Esprit de corps is the unit's personality. It expresses the unit's desire to strive, succeed, and endure as a group. Esprit de corps depends on the satisfaction the members get from belonging to a unit, their attitudes toward other members of the unit, and confidence in their leaders.

Esprit de corps in its highest form can endure in the identity of an organization even though the membership of the group changes entirely over a period of time. Organizations like the Marine Corps, with a sense of history, tradition, and pride of accomplishment, have been able to pass their esprit de corps from one generation to the next.

Strong esprit de corps can inspire a group to overcome seemingly insurmountable obstacles, endure extreme hardship, and achieve goals that would otherwise be unattainable. Esprit de corps is responsible for countless upset victories in athletic contests; has turned defeat into victory for hopelessly outnumbered military units; and has made survival possible for scores of explorers and seamen stranded at the mercy of hostile elements. Esprit de corps fosters good discipline, enhances morale, and increases the proficiency of any organization or group.

Following are some of the factors to be considered in evaluating esprit de corps in a unit:

1. Expressions from the men showing enthusiasm for and pride in their unit.

2. A good reputation in the eyes of others.

3. A strong competitive spirit.

4. Willing participation by the members in unit and school activities.

5. Pride in the traditions and history of the unit.

6. Readiness on the part of the cadets to help one another.

7. The belief that their unit is better than any other unit.

8. High rate of retention of members.

9. Strong school spirit and loyalty.

DISCIPLINE

Discipline is the individual or group attitude that insures prompt obedience to orders and initiation of appropriate action in the absence of orders. Discipline is a state of mind that produces a readiness for willing and intelligent obedience and appropriate conduct. Discipline within a unit insures stability under stress; it is a prerequisite of predictable performance. When achieved in a unit, it is an attitude that keeps individuals doing what they are supposed to do, and as they are supposed to do it, through strong inner conviction. Good discipline is constant and functions whether or not outside pressures or supervision are present. It is the result of effective training and intelligent leadership that helps the individual to face difficult situations without faltering. Since success in battle frequently depends upon the unit's or individual's immediate positive reaction, discipline demanded in a military organization is of necessity more exacting than discipline in other walks of life. Before a man can act resourcefully in the absence of orders, he must have an understanding of what is to be done and the role to be played by him. This requires training and knowledge. Before he can respond willingly and intelligently to orders, he needs the same understanding of his role, plus confidence in his seniors. This requires leadership.

Following are some of the factors to be considered in evaluating the status of discipline in a unit:

1. Attention to details.

2. Harmonious relations between units and individuals.

3. Devotion to duty.

4. Proper senior-subordinate relationships.

5. Proper conduct of individuals on and off campus.

6. Standards of cleanliness, dress, and military courtesy.

7. Promptness in responding to commands and directives.

8. Adherence to the chain of command.

9. Ability and willingness to perform effectively with little or no supervision.

10. Punctuality in meeting classes and appointments.

11. Temperance.

PROFICIENCY

Proficiency is the technical and physical ability of the individual and the unit to achieve its objectives. Unit proficiency is the sum of the skills of all the individuals in the unit welded together by its leadership into a smooth-functioning team. Your unit will attain proficiency when you demand high standards of individual and group performance. Proficiency results largely from education and training; therefore, much of a unit leader's time will be spent conducting or supervising instruction and training.

Following are some of the factors to be considered in evaluating proficiency in a unit:

1. Personal appearance and physical condition of the cadets.

2. Appearance and condition of weapons, equipment, and unit area.

3. Demonstration of leadership in other school activities.

4. Creative ability and imagination demonstrated by the unit and its members.

5. Leadership ability of junior leaders.

6. Promptness and accuracy in disseminating orders, instructions, and information.

7. Degree of skill demonstrated when accomplishing tasks.

8. Scholastic standing of the unit.

DEVELOPMENT OF THE INDICATORS OF LEADERSHIP

The development of the indicators of leadership is a continuous process. If you understand the factors and forces that produce desired results, you will be better able to direct your efforts along productive lines.

Certain known actions will aid in the development of specific indicators. An action designed to improve one of the indicators of leadership may also affect the others. Following are the indicators and some specific steps that will develop each:

Morale.

1. Teach belief in the cause and mission.

2. Instill in your men confidence in themselves and their leaders.

3. Keep your men aware of your interest in their physical, moral, and spiritual welfare.

4. Establish an effective awards program.

5. Make the cadets feel they are essential parts of the unit.

6. Recognize the cadet's desire to retain his individuality and treat him as an individual.

7. Encourage the strengthening of ties to school and community.

Esprit De Corps.

1. Start newly assigned men off right by a reception program including an explanation of the unit's history, traditions, and present role.

2. Develop the feeling that the unit must excel.

3. Recognize achievements of the unit and its members, and insure that they are properly publicized.

4. Make use of ceremonies, symbols, and slogans.

5. Use competition to develop teamwork.

6. Make proper use of awards.

Discipline:

1. Demonstrate discipline by your own conduct and example.

2. Institute a fair and impartial system for awarding privileges and awards.

3. Strive for mutual confidence and respect.

4. Encourage and foster the development of self-discipline among cadets.

Proficiency:

1. Clearly outline individual duties and responsibilities.

2. Emphasize teamwork through the chain of command.

3. Encourage physical fitness.

4. Promote realistic educational experiences.

5. Provide as many individuals as possible with frequent opportunities to perform duties of the next higher echelon.

6. Set high standards of performance and insist they be met.

7. Place a high value on scholastic achievement.

PASS IN REVIEW

When a child appears to be listless and ill-tempered, his mother may suspect that he is ill and check his temperature. You use a different sort of thermometer to determine which coat to wear when you leave the house in the winter. In the same manner that a thermometer guages the temperature, certain attitudes and actions seen in a group indicate the effectiveness of the leadership of that group. Knowing what to watch for, and how to evaluate what he observes, is an essential element in the makeup of a good leader. The man who can find in the group that which is right, or wrong, can most effectively manage the group. Learn to use the indicators of leadership as tools of your trade as a leader.

a. Can you think of a group whose morale indicates good or poor leadership?

b. What could be done by the cadets in your unit to foster esprit de corps?

c. Explain the relationship between discipline and esprit de corps.

d. Are there other indicators of leadership, not previously mentioned, which a leader can use to judge his effectiveness?

e. How is it possible for a leader to consider the basic needs of his group, the principles of leadership, and the indicators of leadership all at the same time?

42

SERGEANT MAJOR JOHN QUICK, USMC

SgtMaj Quick was a quiet man; he won the Medal of Honor in Cuba in 1898, and the Distinguished Service Cross in WW I, but he would never tell you that. He rose to sergeant in his first enlistment, an extraordinary feat in those days, but to Sgt Quick it was just part of the job. For this man, outstanding performance was routine, just part of the business—and his business was being a Marine. The relations Sgt Quick enjoyed with all men were excellent; he was equally admired and respected by his officers and by his troops, for they all knew that he had an interest in them, and in their common task, the Marine Corps. War correspondent Stephen Crane, author of *The Red Badge of Courage*, watched Sgt Quick as Quick stood exposed to enemy gunners on a hilltop in Cuba, calmly signalling naval gunfire corrections with his back to the enemy while bullets whistled around his head. Crane said of the sergeant, "He was the embodiment of tranquility . . . absorbed only in the business at hand . . . he was magnificent." This calm man only spoke when he had something worth saying, something of importance to the Marine Corps or to the person addressed. His control of his emotions, quiet courage, and confidence in the Marine Corps were noted repeatedly by those with whom he served. A retired colonel, who served as a sergeant with John Quick, called him, "an excellent NCO . . . a personal friend . . . one of the most outstanding Marines. . . ." Sgt Quick earned such commendations from his contemporaries, and from his commanders, by practicing his business of leadership in such a way as to foster excellent relations with all those men with whom he came in contact. He was an exceptional leader because he listened to others, he appreciated their efforts, and he did not consider himself all-important. Sgt Quick employed his human relation skills to build confidence, to furnish inspiration, and to maintain morale, and in so doing he led his Marines to serve as well as he did.

CHAPTER 5

DEVELOPING HUMAN RELATIONS SKILLS

Most people who fail as leaders fail because they lack the ability to deal successfully with other people. Perhaps you have known someone who displayed superior scholastic or athletic ability, but was unable to gain acceptance as a leader because he did not have the ability to influence others in a positive way. He failed to develop human relations skills along with his academic or athletic skills.

It may appear strange to speak of human relations in terms of learned skills, because we tend to think of this as an inherent ability. Nevertheless, we can learn to deal successfully with people, and most of us do, to a certain degree. But most of us never reach our full potential, because we learn our human relations skills mostly by trial and error. This can be a lengthy process and is not the best way to learn something that is important for your future success.

As a Marine Corps Junior ROTC cadet, you can learn human relations skills in an environment that provides close guidance and plenty of opportunities to practice and develop those skills as you learn them.

Successful human relations is more than just getting along with others and maintaining cordial relations. It also means being able to influence people in a positive way. It means making people want to cooperate with you and help you to achieve worthwhile goals. This is not to be confused with using people for your own interests. In successful human relations, all people involved gain positive benefits, because the basis for good human relations is the satisfaction of the human needs of others as well as your own. You will find that most of the techniques for good human relations are concerned with the interests of others.

The human relations skills and techniques discussed in this chapter have been tried and proven by outstanding leaders. We will not attempt to explain all of the psychological reasons behind these techniques. Psychologists themselves do not agree on the explanations behind many of them. The important thing is that they work and that you can use them in your daily dealings with people. This includes your family, your classmates, teachers, and everyone with whom you come in contact. By using these skills and techniques you will not only enrich your own life, you will also help to enrich the lives of others.

KEY TO SUCCESS

Most people who fail in business do not fail because they do not have the knowledge or skills to do their jobs. They fail because they do not know how to get along with people. Several large universities conducted surveys among their graduates to determine how well their former students were doing in their jobs and careers. One of the surprising things they learned

was that those students who had the best grades while they were in school were not always the ones who were most successful. One school found that those graduates who had shown a special ability to get along with people were earning 15 percent more than the "smart" group and 33 percent more than those with low personality ratings. It was also found that of those people who had lost their jobs, only 10 percent had been fired because they did not know their jobs. The remaining other 90 percent had lost their jobs because they did not know how to get along with people. Knowing how to get along with people is just as important as knowing your job.

Getting along with people is something that can be learned. Just as you learn other skills, you can learn the skills of dealing with people. The person who makes an honest effort to learn to deal successfully with people will be far ahead of those who depend on trial and error alone. It is not enough to memorize a set of "rules" for dealing with people. You must learn something about human behavior. The study of human behavior is simply learning why people behave as they do. Once you understand why people act in certain predictable ways, you will find it easier to learn and apply human relations skills.

These human relations skills are not theories or complicated psychological techniques. They are simple things that anyone can do to influence others. The skills you will learn are used by successful people everywhere, in business, politics, government, and the military services. The most important thing about these skills is that you will be able to use them at once. They are guaranteed to have an immediate effect on your ability to lead and influence others. They will be your key to success now and in the future, wherever you go and whatever you do.

SHOW INTEREST IN OTHERS

The best way to get people to become interested in you and your ideas is to show interest in other people and their ideas. By showing interest in others, you give them a feeling of importance, thus fulfilling one of the basic human needs. Your interest in others can be expressed in many ways. Everyone has interests that are important to him: his family, his hobbies, his job, his friends. By inquiring about a person's family or other interests, you establish a common ground for agreeable discussion. You will discover also that the more you know about a person the more interesting that person will become. You will be surprised at how many interests you have in common with others. You may meet a perfect stranger who shares your interest in sports, a hobby, or who may have visited some of the same places that you have visited. Any of these is a ready subject for friendly discussion. Such common interests lead to mutual respect and understanding between people, and makes people willing, even eager, to cooperate with each other. Make it a habit to show interest in everybody you meet, whether you think they are important or not. Chances are that you will find something interesting in everyone you meet, if you will take the time to inquire about his interests. What is more, he will probably find you more interesting. After all, weren't you intelligent enough to recognize his importance?

THE MAGIC OF A SMILE

Think of the most popular people in your school. You will probably find

that the teachers and students who are best liked are those who show their inner happiness by smiling a lot. A ready and willing smile is one of the best human relations skills you can have in your bag. It costs absolutely nothing, but it is worth a million dollars to the person who will share it with others. A smile delivers a message that says, "I recognize you as a friend, and I like you." When you smile at another person, it also indicates that you think he is worth smiling at.

The smile is such an effective communications tool that it is effective even over the telephone. Does that sound ridiculous? Well, it shouldn't, because the telephone companies think it is important enough that they teach their operators to smile while they are talking to customers on the line. They know that the smile will come through at the other end of the line. It is almost impossible to smile and speak in anything but a pleasant voice.

Many of the leading salesmen think the smile is such an important tool in their sales kit that they practice smiling in the mirror every morning. They warm up their facial muscles just like an athlete warms up his muscles before a game. If you have difficulty smiling easily, try a little practice. You may feel ridiculous at first, but nobody will be watching. You will find that you cannot muster up a genuine smile unless you have a smiley feeling inside. A phoney smile is easy to recognize. Practicing can help you to work up that smiley feeling at will.

To put this human relations skill to work for you, just try for one day to smile at everyone you meet, friend or stranger. Just relax and let your good feelings for people show. You may be amazed at the response from others. A smile is contagious. You get back as many smiles as you give. Remember, nobody likes a sourpuss. Make it a habit to smile a lot. You owe it to yourself as well as the people around you.

LEARN TO LISTEN

Supreme Court Justice Oliver Wendell Holmes gave this advice on human relations:

> To be able to listen to others in a sympathetic and understanding manner is perhaps the most effective mechanism in the world for getting along with people and tying up their friendship for good.

Did you ever hear a conversation in which it appeared that nobody was listening, but everybody was just waiting to put in his two-cents worth? In this kind of conversation there is not much communication going on. Each person is just talking to himself while the others are trying to think of something clever to say and looking for an opportunity to break in. It is impossible to engage in meaningful conversation without spending a good portion of the time listening to the other person's point of view.

There has been much said and written about how to become a good conversationalist. Everyone wants to be able to engage in intelligent and clever conversation. Some people think that the secret to good conversation is to have a lot of witty things to say on a multitude of subjects. You have probably known the kind of person who is a self-appointed expert on everything. He has an answer to every question, sometimes before it is asked, and is not afraid to interrupt or change the subject to get his point across. Armed with an arsenal of unrelated and irrevelant facts and opinions, this guy is ready to do verbal battle with everybody within hearing. This kind of person may be entertaining for a while, but he soon

becomes a bore. In his attempt to impress everyone with his intelligence and knowledge, he succeeds only in alienating everyone and wonders, "why does nobody ever listen to me?"

What this person fails to understand is that to be a good conversationalist, you must first be a good listener. Before you can know what to say in a conversation, you must know what interests the people to whom you are talking. The only way you can know this is to listen. Listening does more than get you tuned in to a subject for conversation. It also makes you appear important and intelligent to the other person. By listening, you indicate that you think what he has to say is important. This makes you important in his eyes. He will think you must be very intelligent to listen to what he has to say.

In his book, *How to Have Confidence and Power in Dealing With People*, Les Giblin lists the following techniques for applying the skill of listening in human relations.

1. Look at the person who is talking.

2. Appear deeply interested in what he is saying.

3. Lean toward the person who is talking.

4. Ask questions.

5. Don't interrupt; instead, ask him to tell more.

6. Stick to the speaker's subject.

7. Use the speaker's words to get your own point across. (Giblin, 1956)

Practice these techniques, and you will be recognized as a person of good taste and intelligence. You will also find that by listening to others, they will be more interested in what you have to say. Remember the words of the Roman statesman and philosopher, Publius, "Let a fool hold his tongue and he will pass for a sage;" or a more contemporary version, "It is better to remain silent and appear a fool than to open your mouth and remove all doubt."

MAKE PEOPLE FEEL IMPORTANT

All of us want to feel worthwhile and important. Self-esteem is one of our most important human needs. Regardless of a person's status in life, if he does not feel that other people appreciate his personal worth, he will be unhappy and unsatisfied. A person who has a low opinion of himself is usually very difficult to get along with. If we make people feel important, it will not only give them the personal satisfaction that they need, but it will also make them want to do things for us that will be further proof of their worth. Surveys have shown that the most often mentioned cause for job dissatisfaction in industry is not the pay or the working conditions; it is the feeling of employees that management does not appreciate their importance. When a person does a good job, he expects, and is entitled to, a pat on the back. If he doesn't get it, he believes with good reason that his importance is not recognized, and he may soon be looking for a job where his worth will be better appreciated. Enlightened management realizes the value of recognition and appreciation in maintaining good employee relations. They employ a variety of techniques to show to their employees that they are important and their efforts are appreciated. Some of these same techniques are useful in any leadership situation.

Some of the techniques that you can use to make people feel important are listed below:

1. *Consider People Important.* If you are not convinced yourself of the fundamental worth and dignity of others, you will be unable to show genu-

ine appreciation. Remember that every human being is a unique creation, endowed with his own special talents.

2. *Take Notice of Other People.* Let people know that you are aware that they are alive. Speak to people you meet. Don't be aloof or appear disinterested in others.

3. *Show Appreciation.* Be generous in your praise for a job well done, and don't be afraid to say "thank you" for a favor. Praise in public, but if you must use censure, do it in private. To be effective, expressions of praise and appreciation must be sincere. If you use praise just to gain favor or to make an impression on someone, it will be recognized as such. Don't praise a person because of who he is, but because of something he has done. Show the sincerety of your praise by telling the person what it is that you are praising him for. Like many other virtues, praise can be overdone. If it is used for insignificant accomplishments, it can become a hollow gesture.

4. *Play Down Your Own Ego.* Do not build up your own importance at the expense of others. If you are in a leadership position, do not take all the credit for accomplishments of the group. Give other members of the group their due recognition, and assume the responsibility for failures yourself. Above all do not ridicule or belittle others to make yourself look better by comparison.

5. *Be Considerate of Others.* Observe the small courtesies that let people know that we think they are important. Don't miss appointments or keep people waiting. This indicates that you do not think they are very important.

REMEMBER NAMES

Remember that a man's name is to him the sweetest and most important sound in any language.
Dale Carnegie

When you pick up your school yearbook for the first time, what do you look for first of all? If you are like most of us the first thing you look for is the page that has your name and picture. Then you will probably look for your name and face among pictures of teams or organizations to which you belong. We do this because our name and our picture are important to us.

It also gives us satisfaction when our name and face are recognized by others. There is nothing as flattering to a person's ego as to be called by name by someone after a prolonged absence. It tells us that the other person thinks we are important enough to remember. It is hard not to like someone like that. Remembering names is a skill that supersalesmen and politicians use to great advantage. Calling a person by his name establishes a cordial and friendly relationship that helps to promote agreement and cooperation.

Some people have developed this ability to associate names and faces to a high degree. It has been said that Julius Caesar could call every man in his legions by name. This is probably an exaggeration, because a legion consisted of about 6,000 men, and Caesar usually commanded several, but he did appreciate the value of knowing his men by name. Napoleon, too, had a remarkable ability to remember names and faces. Frequently, while inspecting troops, he would stop in front of some veteran soldier, call him by name and say something like "Ah, yes. You were with me at Austerlitz." Then he would inquire after the soldier's wife and children or make some other personal inquiry. Of course, Napoleon had been well briefed in advance by his adjutant, but he took the time to learn about his men. He knew the effect it had on their loyalty to him. He knew his men would put more effort into their work-

ing and fighting if they thought he might take notice of them.

Remembering names is not just a gimmick that you can use to impress people. It is a useful human relations skill that reflects a genuine interest in other people. Most of us recognize the value of this personal touch in dealing with people but we still fall short when it comes to putting it into practice. Have you ever been introduced to a group of people and find that two minutes later you are unable to repeat any of their names? This can be embarrassing if the group is soon joined by others and you are expected to make further introductions. Inability to remember names in a situation like this is usually a case of not really hearing the names in the first place. Very often when introductions are made, we are self-conscious about how we look, what we are saying, or the impression we are making. Consequently we don't pay close attention to what others are saying. We are simply not tuned in to hear names when they are spoken.

Remembering names is not a skill that comes naturally to most of us, but it is a skill that can be learned. By practicing a few simple techniques, most of us can improve our ability to remember names in a very short time. There are three techniques that are used and recommended by practically all of the experts in recalling names. These techniques are: (1) impression, (2) repetition, and (3) association.

Impression. The first technique for remembering a name is to form a vivid impression of the name when you first hear it. To do this you first have to hear the name clearly and get a sense of the proper pronunciation or sound of the name. It also helps if you can get a mental picture of the proper spelling. If you do not hear or do not understand the pronunciation, ask the person to repeat his name. If it is an unusual name, ask him to spell it for you. He will not be offended that you ask him to pronounce or spell his name. To the contrary, he will probably be flattered by your interest in his name. If it is a name you have not heard before, you might ask him something about the origin of the name. All of these things will help you to form an impression of a person's name by repeating the name several times while it is fresh in your mind. If you use the name two or three times in your conversation soon after an introduction, you will probably never forget it. If you cannot use the name in conversation, you should at least repeat it in your mind. If it is important that you remember a name over a period of time, it is helpful to write the name down at your earliest convenience. This will help you to remember it by creating a visual impression of the name and you will have it on record for future reference.

Association. The third technique for remembering a name is association. This memory technique involves the association of the new or unfamiliar with something that is familiar. By thinking of the familiar, we are reminded of the unfamiliar by association. This association can be of many kinds. A simple example would be a name that is identical or similar to the name of a person you already know. If there is also a physical resemblance there is a stronger association. Of course it is seldom that such similarities of name and appearance occur, but there are other means of association. An effective method is the association of a name with some physical characteristic of the person. If a person named Longfellow happened to be a tall, slender person, that would be a natural association of the name with the appearance. If no obvious association comes to mind, you can create one. A good way to do this is to imagine the person performing

some activity that is in some way related to his name. You might imagine a person named Barksdale running through a dale, barking like a dog. The more ridiculous the dramatization, the more likely that you will remember it. To remember several names as a group, you may associate them all together in some activity. Sometimes a group of names will suggest an activity, song, or rhyme that makes for a natural association. It requires only a little imagination, but it works. You can think of these associations as pegs that you can hang names on. When you need to recall a name, you need only to go back and select the proper peg.

These techniques—impression, repetition, and association—will help you develop the habit of remembering the names of people you meet and those with whom you work. You will find that the more you practice remembering and recalling names, the better you will become at it. At first you may find that it takes real effort and concentration, but as you gain confidence in your ability, it will become more natural, and you will find it easy to remember the names of a surprisingly large number of people.

If you are a squad leader, platoon sergeant, platoon leader, or company commander, you are expected to know the names of all of your men. Small unit leaders should keep a notebook with names, personal data, and information concerning special achievements and qualifications of their men. This information will help you to know your men and will enable you to employ your men according to their aptitudes and talents. Take a lesson from Caesar and Napoleon and add this personal touch to your leadership.

HUMAN RELATIONS SKILLS

1. Show interest in others.
2. Smile a lot.
3. Learn to listen.
4. Make people feel important.
5. Remember names.

PASS IN REVIEW

No man exists in a vacuum; whatever his occupation, wherever he lives or works, the modern man is constantly in touch with his fellows. Not only is he with them, but most often what he does is dependent on others. This interrelation with other men is certainly a fact of life for the leader, for his purpose is to manage a group—to guide and motivate other men. It is, then, of vital importance to the leader that he develop his human relations skills to the highest possible degree, for his success or failure is totally dependent on his relations with others, and while he may get the job done without relating well, he will not be as effective or as efficient as he might be if he fails to make the effort to improve his human relations skills.

a. What can be gained by demonstrating an interest in other people?

b. Can you relate human response to a tone of voice in a similar manner to the way an animal will respond to a harsh or soft tone?

c. Describe the effect poor communication has on human relations.

d. How can merely listening to a person cause him to feel important?

e. Discuss the importance to a leader of remembering people's names.

f. What relation is there between basic human needs and human relations?

CHAPTER 6

COMMUNICATION SKILLS

The ability to communicate effectively is a vital factor in leadership and group action. The leader must be able to communicate his ideas, desires, or commands to the group that is to put them into action. This is not a one-way process, however. The leader must also be able to receive, understand, and evaluate information from the group, and group members must be able to communicate with each other. Without this exchange of information, the group would be unable to define its goals and determine courses of action to achieve them. The ability to communicate is important for success in any field. Brilliant ideas are useless unless they can be translated into action through communication.

The ability to speak or write clearly, concisely, and logically does not insure the ability to communicate effectively.

The exchange of information between people may appear to be a simple process, but in reality it is complex and difficult. There are many barriers that can block or distort the meaning that is intended between the sender and the receiver. This chapter discusses the purpose and objectives of communication and describes some of the barriers to effective communication and suggests ways to overcome these barriers. An understanding of the elements of communication will help you to use more effectively the communication skills of speaking, listening, reading, and writing.

WHAT IS COMMUNICATION?

Communication is the exchange of ideas, feelings, or attitudes between two or more people. Its effectiveness is measured by the similarity between the idea that is transmitted and the idea that is received. Whenever there is a great difference between what is transmitted and what is received, there is a breakdown or failure of communication. Very often we are not aware of our communication failures. We assume that everyone knows what we are talking about and that we know what others are talking about. This assumption is the source of many of our communication problems.

We also measure the effectiveness of communication by the response or results we get. A favorable response indicates that our communication was understood and accepted by the person to whom we were communicating. Sometimes it is easier to have our ideas understood than to have them accepted.

PURPOSE AND OBJECTIVES OF COMMUNICATION

We communicate with others because we want some kind of response from them. Much of our interpersonal communication may not seem to have much purpose, but even the most casual conversation or greeting serves to reassure us that we are alive and recognized as part of the human race. Other kinds of communication may have a more definite purpose. A job interview is an example of communication with the definite purpose of obtaining something that we want or need. In such a situation we would want to make certain that the interviewer understood our communication just as we intended. We also hope that he would find our message agreeable and give us a favorable response. A favorable response would be that we are hired for the job. Norman B. Sigaband, in his book, *Communication for Management*, describes the purpose of communication in a set of objectives which he lists as follows:

1. We would like to be understood exactly as we intended.

2. We would like to have the receiver of our message agree and accept that message.

3. We would like to secure a favorable action or response to our message.

4. We would like to maintain favorable relations with those with whom we communicate. (Sigaband, 1969)

HOW WE COMMUNICATE

There are three basic ways in which humans communicate: (1) by physical touch, such as a handshake, a pat on the back, or a slap in the face; (2) by physical movements or gestures, such as pointing a finger, shrugging the shoulders, smiling, or frowning; and (3) by various sets of symbols. The first two methods—touch and visible movement—usually are very direct and easily understood. The other method—the symbolic—is more complex and at times

more difficult to interpret. These symbols may be classified as nonverbal and verbal symbols.

NONVERBAL SYMBOLS

The nonverbal symbols include visual symbols such as photographs, charts, diagrams, works of art, equations, etc. These visual symbols are generally easy to interpret. It is estimated that 85 percent of our knowledge comes through visual impressions. By recreating experiences with visual symbols we can take advantage of our practiced and reliable sense of sight. There is truth to the Chinese saying, "One picture is worth 10,000 words." Visual symbols are very effective for communication when exact interpretation of the meaning is critical. Blueprints, maps, mathematical or musical notation, and electrical circuit diagrams are examples of visual symbols that are used to convey precise meanings that are necessary for certain kinds of communication. The effective communicator must be alert for opportunities to communicate through realistic visual symbols.

Our sense of hearing makes it possible to use a variety of sounds to convey many kinds of nonverbal messages. The composer of the symphony and the composer of a "rock" song both have a message to communicate through musical sounds. These messages are usually of an emotional nature. Each wants the listener to react in some way to his music—not necessarily in the same way, however. The motorcycle rider who races his engine while waiting at the traffic light is also trying to send a message and get a response. The traffic patrolman, however, may not understand the message of the motorcycle rider, and may sound his own message with a siren a few blocks down the street. Any unpleasant experience that results from this encounter might be traced to a failure in communication.

Even our sense of smell opens up avenues of communication. This may be intentional or unintentional. When a girl puts a dab of Chanel Number 5 behind her ears, she has a message she wants to send and probably expects a certain kind of response. On the other hand, a person who fails to bathe regularly may convey quite a different message unintentionally. The smell of a turkey roasting in the oven on Thanksgiving Day delivers a message with strong personal meaning to most of us.

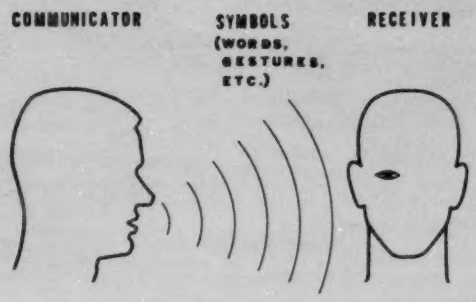
These nonverbal messages that we send by sight, sound, smell, or touch do not cause much difficulty for most of us. We may not respond to them in the same way, but we can generally perceive them very much as they were transmitted. This is not necessarily true of verbal communication.

VERBAL SYMBOLS

Our verbal symbols are the words that make up our spoken and written language. We learn to arrange these word symbols into recognizable patterns to describe the events, ideas, and feelings that make up our personal experience. The words themselves have no meaning. They have meaning only when we relate them to our personal experience. Because no two people ever experience things exactly the same way, our word symbols have different meanings for different people. Failure to recognize these differences can lead to misunderstanding and a breakdown of the communication process.

THE COMMUNICATION PROCESS

The communication process is composed of three basic elements: (1) the



The Communication Process.

communicator, (2) the symbols, and (3) the receiver. The communicator is the person who orginates the message, encodes it in the proper symbols (words, gestures, or sounds), and transmits it to the receiver. The receiver is the person for whom the message is intended. He must detect the signal, decode the message, and interpret the meaning. The message may be transmitted by any means that can be detected by the physical senses but the primary means are sight and sound. A communication failure can occur in any one of these elements. A failure can occur in the communicator if he is unable to think logically and organize his thoughts in a way that can be understood by the receiver. Symbols cause a lot of difficulty, because very often they have different meanings for the communicator and the receiver. The receiver can cause a communication failure if he is inattentive or choses to ignore the message. What appears to be a simple process can become rather difficult when any one of many possible barriers appears in the system.

BARRIERS TO COMMUNICATION

There are many physical and psychological barriers to effective communication. The effective communicator must learn to recognize these barriers in order to avoid or overcome them. Some of the barriers that cause the most difficulty are discussed in the following paragraphs. See if you can recognize any of them from your own experience, and try to imagine how you might have overcome them.

Differences of Background and Experience. Probably the greatest single barrier to effective communication is the difference of background and experience between the communicator and the receiver. This barrier is related to the differences in meaning that are given to word symbols. Words do not carry meanings from the speaker to the listener in the same way that a truck carries bricks from one location to another. Words never carry the exact same meaning from the mind of the speaker to the mind of the listener. In fact, words do not carry meanings at all. Words can only stimulate some meaning that already exists in the memory of the listener or reader. If he has not experienced something in the past that is very similar to what the speaker or writer is trying to communicate, he will not be able to interpret the message in the way it was intended. It would be very difficult to convey the meaning of the word "snow" to a person who had spent his life near the equator. Even when people experience the same event, they never see it in exactly the same way. Witnesses to an accident almost never see it exactly the same way. If there are a dozen witnesses, there will be a dozen different accounts of the accident, many of them in direct conflict.

This barrier is difficult to overcome, because all of us cannot have the same experiences. Even if we could, we would not perceive them in exactly the same way. We can, however, improve our communication by trying to see things as others might see them. This means putting yourself in the other

person's shoes and looking at things from his point of view.

Poor Listening. Poor listening is another serious barrier to communication. Listening is one of the most neglected communication skills. The average adult spends approximately 60 percent of his waking hours listening. A student spends even more of his time listening. Yet we devote very little effort to improving our listening skill. The average person can speak at the rate of about 140 words a minute, but our mind works at about four times that speed. It is difficult to keep our mind from wandering to other thoughts while it is waiting for the speaker to catch up. In a conversation the listener may be busy thinking of what he is going to say rather than listening to the speaker.

It is possible to train yourself to be a better listener. Instead of letting your mind wander, you can concentrate on what the speaker is saying and try to see beyond the meaning of the words. Try to anticipate what he is going to say next and show a genuine interest in what he has to say.

A Closed Mind. Another barrier to communication is a closed mind. If a person is not receptive to new ideas, he shuts off an important channel of communication. A "know-it-all" attitude is a common symptom of the person with a closed mind. If you are to develop and grow intellectually, you must leave your mind open to new information and ideas. Be willing to listen to new ideas and seek out opinions and ideas of others. You do not have to accept every new proposition, but you should be willing to weigh and consider new ways of thinking and doing things.

Fact versus Inference. Someone has said wisely that "It ain't what we don't know that hurts us, it's what we know for sure that ain't so." Too often we accept as fact things that may not be true at all. We say things like, "The sun rises in the east," when we know from scientific evidence that it doesn't "rise" at all. It merely appears to rise because we can only see it from our vantage point here on earth. We make similar inferences about other things that we observe. We say things like, "He is lazy," when we really mean that when we observed him he was not working, so he must be lazy. When we assume from limited observation that we know all the facts about a person or a situation, we are closing our mind to other possibilities.

You can overcome this barrier to communication by carefully weighing your facts and separating them from things that you only assume to be facts. Remember that there are many sides to every question. Try to observe things from all sides and be slow to accept inferences as fact. A little healthy skepticism can improve the reliability of your communications.

In the following sections you will find some guides for developing the four most frequently used means of communication: speaking, listening, reading, and writing. As you study those chapters, keep in mind that the sole purpose of those skills is to effectively convey your ideas to others in such a way as to make them understood, get a desired response, and maintain good relations.

SPEAKING

Speaking is one of the four basic communication skills. Because everyone takes the ability to talk for granted, the study of speaking is too often considered unnecessary. Disciplined study of the principles and concepts of speaking, however, adds to speaking effectiveness. The most significant of these concepts are suggested by the

following question: What does a speaker talk about? How does a speaker get ready to talk? What happens when a speaker speaks? Principles of subject selection, speech preparation, and delivery are important considerations for the public speaker.

WHAT TO TALK ABOUT

The success of any communicative effort depends on whether the receiver responds in the way the sender had planned. Therefore, a speaker must analyze his audience before he selects a subject. He must select a subject to which the audience can respond. Consequently, he needs to know the educational and social background of his listeners. What they already know has a direct bearing on what he will talk about. A clear picture of his audience permits the speaker to predict their reaction to a subject. This knowledge about his listener helps the speaker to decide not only what to talk about, but also how to talk about it.

HOW TO PREPARE

The first task any speaker faces in getting ready to talk is to determine and to limit the purpose of his speech. The other steps of speech preparation—gathering materials, planning organizational patterns, and completing a speech outline—stem directly from his purpose.

PURPOSE

Traditionally, all speeches are classified according to one of three purposes—to inform, to persuade, or to entertain. When a speaker hopes to impart new knowledge to his audience or to increase what they already know, the speech is *informative*. If a speaker wishes to change or reinforce his listeners' opinions, attitudes, and perhaps their behavior, he gives a *persuasive* speech. If the speaker wishes his listeners to relax and to enjoy themselves, the purpose of his speech is to *entertain*.

Because of limiting factors, such as time, audience background and experience, speaker ability, and occasion for speaking, the general purpose of a speech must be limited. For example, "to inform the audience about democracy" is such a general purpose that it would be impossible to cover all the aspects of that topic in one session. A more specific purpose, such as "to inform the audience about the ancient origins of democracy," would be more realistic and more likely to be carried out succesfully. The well prepared speaker writes his specific purposes and keeps the written statement before him as a guide as he proceeds with the preparation of the speech.

RESEARCH

With his purpose in mind, the speaker now proceeds to the second step—gathering material on his subject. Three sources of information are especially helpful: his own knowledge and experience, the knowledge and experience of others, and research.

The speaker should start his preparations by assessing his own knowledge and experience. What does he already know about this subject? From this survey he can develop a checklist of areas in which he needs further research and study.

The speaker is now ready to do primary research. He knows what aspects of his subject he needs to study. He may look for research material in a library. If he has narrowed his sub-

ject properly, he will have to do research on only a relatively small part of the total subject.

As he converses, reads, and observes, the speaker is evaluating ideas. He then tentatively screens all of his material to see if it is relevant to his purpose. This preliminary screening allows him to list ideas.

What should the audience know about the subject? What ideas must the speaker get across if he is to achieve this purpose? From the material he has gathered, the speaker makes a list of all ideas that might be important, without attempting to evaluate or to expand them at this point. He need write only a word or phrase about each idea. Now he is ready to evaluate his ideas. He discards some as irrelevant or unimportant; he combines others. Usually, he finds that the ideas he keeps fall into two or three categories. These are his main ideas.

The speaker must remember that he can adequately support only two or three main points in a period of about twenty minutes. Even in an hour, he should not try to cover more than four or five main points. The receiver should not be asked to follow and to remember too many points at a single sitting.

DETERMINING PATTERN

By analyzing the list of ideas he has developed, the speaker can determine their interrelationship. Once he finds this relationship, he is able to establish the pattern he will follow in presenting his ideas. Possible patterns are numerous, but five are ordinarily used.

The time pattern is probably the one most commonly used. This pattern is quite effective in a report, permitting events to be narrated in chronological order.

The topical pattern can be used when the main points must be listed, for example, in presenting reasons in support of a proposal or a contention.

The cause-and-effect pattern is useful for explaining forces or circumstances that have produced a particular result.

The space pattern, which is often called "geography book" pattern, can be effective in describing things.

The problem-solution pattern permits several possibilities to be considered and all but one of them to be eliminated by showing how the others fail to solve the problem.

If the speaker's subject is too broad to be handled with ease, he may be able to find the source of his difficulty by using one of the above patterns.

The best pattern is usually the one that most readily accomplishes the speaker's overall purpose. He should select the pattern that promises to clarify the material for the audience, and he should follow that pattern in presenting all his main points. He may, however, adopt other patterns to develop supporting points.

OUTLINING

The final step in planning for speaking is to outline the ideas. The speaker's outline gives him structure to follow, and it also helps him to check the purposefulness, logic, and completeness of his presentation. The outline should never be viewed as a crutch, but as a tool in the process of preparation. Many successful speakers consider their speeches to be only as strong as the outlines developed as a final step in organizing and planning to speak. The value of this tool cannot be overemphasized.

The speaker should give special attention to each part of his speech: the introduction, the body, and the conclusion. The body of the speech covers

the speaker's main ideas, the things he wishes to communicate to his listeners. The introduction and the conclusions of a speech serve special purposes.

The introduction should catch the attention of the audience. To do this, the speaker might use a vivid example, a joke, or a surprising statement, making certain that whatever he uses is related to the subject of his speech. Ideally, this step focuses the attention of the audience on both the subject and the speaker. The speaker must then hold their attention by showing why they need the information to be offered, why it is to their advantage to continue to listen. After the audience is motivated to listen, they should be told briefly what is to be covered in the speech. This alerts them to look for the main points.

The basic function of the conclusion is to summarize main points and to reemphasize the objective of the speech. It should do more than merely itemize points; it should tie the main ideas together. If possible, the speaker should remotivate his listeners so they will remember and apply what he has said. He should close his speech forcefully, yet gracefully, and lend a tone of finality to his presentation.

SPEECH DELIVERY

No matter how well a speaker has planned, organized, and supported his ideas for a lecture, he faces the real test when he presents his material to his receivers. His delivery can give his ideas dignity, force, and effectiveness. Through skillful use of his voice and body, he can project his ideas and accomplish his purpose.

The test of good delivery is whether the speaker holds the attention of his listeners and therefore furthers his purpose in speaking. Anything in his delivery that draws attention away from his main ideas is detrimental to his purpose. Delivery can be improved through practice. Some suggestions for improving delivery follow.

DIRECTNESS

Some speakers seem to be addressing the ceiling, a knot in the floor, or someone outside the room rather than the people in their audience. This failure to develop a sense of communication with the audience is a common fault of beginning speakers. They seem to avoid the purpose of speaking; to communicate ideas that are calculated to win a desired response. The lack of a communicative attitude seriously weakens any presentation.

In its broadest sense, directness means talking to and with an audience, not simply at or in front of them. If a speaker feels an inner urgency to communicate ideas and is aware of what he is saying while he is saying it, his manner is direct. No effort to achieve directness is necessary for the speaker who is sold on what he has to say and who has a lively, intimate, and friendly feeling toward his listeners.

In a specific sense, directness means eye-contact. The failure of a speaker to look his listeners in the eye usually indicates fear or timidity. These reactions to the speaking situation can be overcome by forgetting oneself and seeking opportunities to speak before others. If a speaker does not look at his audience, he misses some valuable guidance from his listeners: their signs of doubt, misunderstanding, or disagreement. He should capitalize on the opportunity to adjust at once to the reactions of his listeners. This opportunity, which is peculiar to oral communication, should be welcomed as a means of insuring understanding.

SINCERITY

Sincerity results from a deep and abiding belief in the importance of the subject and in the correctness of information. This quality reveals itself through voice, action, and facial expression. A speaker cannot continue to maintain an appearance of sincerity if he is actually not sincere. Sooner or later, listeners "get the speaker's number." If they feel that he believes what he says, they are inclined to believe also.

Sincerity and enthusiasm are contagious qualities, and both go far toward winning a favorable response. On the other hand, an indifferent delivery carries no conviction. If a speaker does not build confidence in his subject matter, in himself, and in his relationship to his listeners; if he is arrogant, patronizing, hostile or fearful, his listeners are likely to reject his ideas no matter how worthwhile they may be.

VOICE

Rightly or wrongly, voice is used as an index to human characteristics such as attitudes, personality traits, and physical condition. And usually it is a surprisingly accurate index. The weak and apologetic voice connotes timidity, fear, superficiality, or other undesirable qualities in the speaker. The loud and boisterous voice indicates a bully or a bluff. A voice should be free from distracting, unpleasant characteristics. To hold attention, a voice should be easily heard, pleasant, and characterized by variety in pitch, force, and rate. Since all points in a talk are not equally important, the speaker should vary his speed, tone, pitch, and loudness to hold interest and to lend emphasis to ideas that he wishes to stress.

BODILY ACTION

Bodily action includes gestures, facial expressions, movement from one place to another, posture, and the muscle tone of the body as a whole. Exhibitory action—contrived gestures and movements used for their own sake—can detract from what a speaker has to say. Bodily action should arise from inner impulses, from the genuine desire to communicate with others. The good speaker does not rely on rules for moving and gesturing. He does, however, follow two basic principles: he coordinates his bodily action, and he uses his body to express animation.

COORDINATION

All parts of the body should be so well disciplined that they work together as a unit. The effective speaker has something to say, he wants to say it, and he uses his entire body to get his message across. Gestures should arise from a genuine impulse to clarify or to emphasize ideas. Above all they should be unobtrusive, never drawing attention to themselves. In fact, any technique of speech that diverts attention from the central idea defeats the purpose of speaking.

ANIMATION

This quality indicates that the speaker has an enthusiastic interest in his topic. Listeners are quick to sense the lack of thought or feeling beneath a listless delivery. A speaker's action is of two types: overt and covert. Overt actions are the obvious, easily seen movements, such as clenching the fist or waving the arm. Although covert actions are less obvious, they are more important because they tell the audi-

ence a great deal about the speaker and his attitude. Covert actions, which indicate the muscle tone of the body as a whole, reflect the speaker's attitudes and feelings.

It is possible to use a studied overt movement, but impossible to contrive and assume deceptive covert actions. A speaker who strikes the lectern as he says, "If you believe in freedom, you will fight for it now!" may be quite convincing. His listeners may, however, detect a false note in his overall bearing. The speaker may not be half so energetic as he pretends. Even a strong, seemingly appropriate gesture cannot contradict a flaccid muscular tone. To be truly effective, overt and covert action must complement and reinforce one another. Gestures that are used deliberately for their own sake usually do not convince an audience, since listeners are quick to detect inconsistencies between overt and covert actions. Such inconsistencies betray the speaker's real feelings. No action that a speaker may plan and practice can keep his covert actions from revealing his emotional state and his attitude toward himself and others.

USE OF NOTES

A speaker who is thoroughly prepared usually can speak effectively without notes. If he has carefully prepared his speech and his outline and is completely familiar with both, he should experience no real difficulty. The speaker whose preparation has been superficial may find it necessary to use his notes as a crutch.

The careful use of notes can, however, offer certain advantages. Good notes insure accuracy, jog the memory, and dispel the fear of forgetting. They are essential for reporting complicated information. For a discursive, rambling speaker they are a must, because they help keep him on the track. The speaker who requires notes should use them sparingly and unobtrusively. At the same time he should make no effort to hide them from his audience. Notes should be written legibly or typed, and they should be placed on the lectern where they can be consulted easily or held if the speaker walks about the platform.

Notes are personal possessions. Any system of notes that serves a speaker well is satisfactory.

The effective speaker, or instructor, selects an important subject only after careful study of his audience. He prepares his speech carefully by giving due consideration to a general and a specific purpose, by evaluating ideas resulting from extensive research, by analyzing the relationships of these ideas, and, finally, by carefully outlining them. He delivers his speech directly, and sincerely, using his voice and body to reinforce his ideas and purpose. He uses notes only as needed.

LISTENING

Listening is one of the most neglected of the communicative skills. The lis-

tener usually neglects to assume his share of responsibility in the communicative process. Many poor listeners try to place the entire burden of the "speaker-listener" process on the speaker. The listener who sleeps through a lecture, for example, is apt to make the excuse that the speaker was dull. The listener who fails to recognize and grasp the speaker's main thoughts is likely to say that he presentation was poor. Such reactions from a listener are usually rationalizations for his own inattentiveness.

Certainly the speaker does initiate the communication process, and he has a certain responsibility for controlling it. Yet he should not be held entirely accountable for the failure of members in the audience to listen. Successful communication depends upon cooperation between the communicator and the receiver.

A student spends considerably more time listening each day than in any one of the other communicative skills of speaking, reading, or writing. This fact alone emphasizes the importance of effective listening habits.

What Is Listening?

Hearing is not listening. A person hears, often without listening, whenever sound waves strike his eardrums. Frequently, one does not remember what he hears, because he did not listen. Almost everyone has been embarrassed by not knowing the name of a new acquaintance because of failure to listen when he was introduced. Even if one remembers, he does not necessarily get the most from his listening. A donkey is not rich simply because he carries gold on his back, nor is a person wise simply because he carries a mass of memorized facts in his head. Facts, memorized without an understanding of their significance, are as worthless to a man as gold to the donkey. In a broad sense, then, listening means hearing, comprehending, and remembering. To do this, a person must concentrate on what he hears. He must be willing to put keen effort into the listening process. Students frequently complain that they cannot retain as muct of what they hear as they should. Their problem is usually caused by failure to concentrate.

By definition, concentration is "close mental application, exclusive attention." From time to time, stories circulate about some "genius" who can simultaneously read a book, listen to his wife talk, hear the President speak by radio, and abstract the important ideas of each. Few people match this performance; in fact, most people have to work at focusing attention on even one subject for any length of time.

The behavior of the mind can be compared to the flow of a river. A river meanders, finding and following the course of least resistance from the mountain to the sea. Every navigable river, however, has a safe channel. The captain who wants to take his ship up and down the river and into the ports on his itinerary keeps the ship in that channel. Like a river the human mind tends to wander, but the effective listener keeps his attention in a mental channel, the channel of concentration. Whenever a listener allows his mind to stray, to slip into a whirlpool, to drift into shallow water, or to run aground, he lets the current of the spoken ideas in the channel pass him by. His attention may get back into the current, but it can rarely catch up with the speaker's ideas. What can a person do to channel his attention? The secret lies in forming good listening habits.

Forming Good Listening Habits

The ability to listen effectively is not a gift; it is a skill acquired through practice and hard work. Anyone who

wants to become a better listener can do so by practicing the following seven rules at every opportunity.

1. Get Ready To Listen

Listening requires physical and mental preparation. The physical preparation for listening can be compared with that for catching a plane. If a man expects to be a passenger on a plane departing at 2000 hours, he must check his baggage, find his seat, fasten his seat belt, and be awaiting takeoff before that time. The same is true of the listening situation. First, the listener must check his baggage, that is, put away newspapers, books, and other extraneous material. Then he must seat himself comfortably before the speaker begins. He should, insofar as possible, prepare to listen to the speaker by mentally "tuning out" distractors such as noise or minor physical discomforts. He should be physically relaxed but mentally alert, with pencil and paper at hand for taking notes. Only then is he ready to travel along with the speaker.

If the listener and the speaker are in the same room, they cannot travel far from each other. Yet, despite their physical proximity, the listener and the speaker do not necessarily travel in the same channels of thoughts and ideas. By failing to listen to the speaker's opening remarks, members of an audience miss the basic structure upon which he will later build his ideas.

Physical preparation is not enough; mental preparation is also essential to good listening. The listener should be ready to "tune in" on the speaker's mental wave length. How does he prepare himself to do this? He starts by reviewing his own knowledge of the subject to be covered and then trying to imagine what the speaker will say. Just as he would study a map before starting on a trip into an unfamiliar area, he studies a mental map of the area through which a speaker is likely to take him. The alert listener will review schedules or other program data which might give him preliminary information about a speaker's topic or lesson. He finds material on the subject of the lecture and reads it. The student who depends entirely on the teacher's lecture and fails to do assigned reading prior to class is being unfair to himself and to the teacher. If he already knows something about the topic, he should think about it and consider what he would say if he were the speaker. This part of the preparation helps the listener recognize the core of experience he has in common with the speaker. By taking to the lecture as much knowledge of the subject as possible, he increases the probability of valuable two-way communication.

2. Take Responsibility For Comprehending

Frequently, an instructor will have a student in his class whose attitude speaks for him, "Here I am; teach me—if you can!". He believes knowledge can be poured into him as water is poured into a jug. He will not get the full benefit of any lecture or lesson until he learns that the successful listening-learning situation demands something of the listener as well as the speaker. Speakers frequently use examples to support points they wish to stress. The listener who feels responsible for comprehending looks for similar examples within his own experience and applies the point to himself or to his job.

Another way to increase comprehension is to rephrase ideas. In describing poor reading habits, a speaker might say, "The reader in this example has too many fixations per line." A listener might rephrase the statement, "This reader allows his eyes to stop too many times on one line of type." Rephrasing in this way helps him understand and retain the speaker's words

into a vocabulary with which he is more familiar.

3. Listen To Understand Rather Than To Refute

Critical listening is a good practice, but it is not achieved by criticizing the speaker's thoughts before he has finished. Silent argument with a speaker while he is speaking can be a waste of time. In a learning environment, the thoughtful listener will analyze but not mentally argue with the teacher or lecturer during the lecture. Unless he honestly attempts to get the speaker's message, the listener cannot be well enough informed to evaluate the ideas intelligently. The listener should listen and wait; he should try to understand first and evaluate second. Some or all ideas may deserve to be questioned and tested, but the testing should be done after a speech or lesson is finished. On the other hand, the responsible listener may find that no disagreement exists.

4. Control The Emotions

The listener should not permit emotional blocks to develop between himself and the speaker. How can a listener be unbiased? If, for example, he is annoyed by a speaker's manner, how can he remain objective about the speaker's ideas? By isolating the source of his negative emotional responses to them, he can often minimize their effects on him. The intelligent listener does not permit emotional blocks to prevent his understanding of a speaker's ideas. Actually, the responsive listener tries to help the speaker—rather than to react unfavorably to him. The listener can assist the speaker merely by displaying an overt interest.

Sometimes, certain words trigger certain emotions. Many terms, such as "Red," "Socialist," "automation," and "collector of internal revenue" are emotionally loaded. Everyone has experienced emotional blocks upon hearing certain words. The person who wants to profit from his listening experiences should make a list of the words that stir him emotionally. By identifying and understanding them as blocks to communication, he can gradually force himself to react to speaker's ideas rather than to their vocabularies.

5. Listen For Main Ideas

It is possible to become too involved in details. The man who boasts, "I listen for the facts," may actually be a poor listener. By concentrating exclusively on individual supporting points he may miss the main ideas. Fact A, Fact B, and Fact C may be interesting for their own sakes but the speaker's reasons for offering these facts may be to derive an important generalization from them. Realizing this the alert listener trains himself to distinguish between main thoughts and the less important supporting ideas. Dr. Ralph G. Nichols states in *Readings in Management*, "We asked the 100 best listeners (in a research project) what they concentrated on in a listening situation and a bit timidly they testified, when we listen we try to get the gist of it—the main idea!".

How has the speaker organized his main points? What organizational pattern has he used? Does he present a main point and then support it, or does he use the opposite approach? Both approaches are effective, and both are commonly used in oral communication. The listeners must look for the relationship of examples, comparisons, and testimony to the ideas they support. If a listener has previewed the subject matter in advance, his listening task becomes easier.

By listening for the main ideas of speakers, anyone can increase his own store of knowledge and understanding. Most people want to know more about many subjects than they have time to learn through personal research. By

listening intelligently, the listener can benefit from the research, experience, and thinking of speakers who are knowledgeable in a wide variety of fields.

6. Be Mentally Agile

Concentrating throughout a speech is a challenge, because people do not think and speak at the same rates. The normal person thinks much faster than the normal speaker can possibly talk. This rate differential gives the listener's mind the time and opportunity to stray from the speaker's subject. But the listener who has disciplined his mind can use this spare time to review what the speaker has said and to predict what he will say. In doing this, he profits from two practices essential to learning: mental activity and repetition. The mentally agile listener has ample time, mentally, to repeat, forecast, summarize, and paraphrase the speaker's remarks. This practice increases comprehension and aids retention.

7. Take Notes

In an unpublished research paper, Doctor Charles V. Irvin, Michigan State University, concludes that the comprehension and retention records of students who take notes are consistently better than those of students who do not. Students should always take notes at teaching lectures. Every student should establish and use a note-taking system that works for him. If he follows his system and establishes the habit of reviewing his notes at the same time every day, his comprehension and memory will improve.

The suggestions for getting ready to listen also apply to taking notes. The student should go to the lecture hall or classroom in time to have his materials ready before the lecture starts. If he uses a separate sheet of paper or note card for each lecture, his notes will be easier to use later on. By using only one side of the paper and leaving enough marginal space, the student can easily make any clarifying notes he may wish to add later from other sources. One efficient system is to use a loose-leaf folder with separate sections for each subject or area covered in a course or lecture series.

Notes should include the speaker's main ideas and enough supporting details to make the main ideas clear. Yet, the listener cannot afford to let the notetaking process interfere with his understanding of what the speaker is saying. The main function of notes is to aid the listener-observer in reconstructing the oral communication upon its conclusion. Often it is helpful to use abbreviations or to jot down key or cue words, rather than complete sentences. When listeners try to take down the speaker's exact words, they risk losing the continuity of his thoughts and, therefore, the purpose of the lecture. In only one instance is it wise to take verbatim notes: for purposes of clarity, definitions of key words should be taken down just as the speaker expresses them.

The listener should watch for "road signs" indicating that the speaker is moving from one main idea to another: such transitions as "another point is" and "in contrast to what I've just said." Notes should be as brief as possible, yet readily understandable. Each note should help the listener recall one of the speaker's ideas. Good notes actually outline the speech.

The student should review and expand his notes as soon after a lecture as possible. This review permits the student to "relive the experience," thereby strengthening his memory of the most important ideas.

The art of listening warrants the best efforts of those who wish to understand and use ideas verbally expressed

by others. A person cannot listen passively and expect to retain much, and although alert listening requires effort, it is still one of the best ways to gain knowledge and understanding. We can be better listeners if we give the speaker our careful attention, just as we can improve our comprehension if we try to understand his point of view. To retain the most important points, we must diligently seek and catch the main ideas. Most forgetting occurs immediately after learning, therefore reasonably brief notes—taken during a speech and expanded later—help to retain the most important ideas for later use.

READING

The student today cannot afford to pass up a chance to read, read, read. The following statistics compiled by William G. Perry, reading specialist, Harvard University, give some indication of the prodigious reading task presented by our technological society:

> Over half of all the technical information printed in the United States since the American Revolution has been published in the last ten years. Currently the world's laboratories and research centers are producing technical papers at the rate of 60 million pages a year. If a fast reading omnilingual scientist reads 8 hours a day, no time off for lunch, it would take him to year 3363 to just finish this year's outpouring of facts.

A major problem for most students is their attempt to absorb this material by using limited reading techniques. A person learns to read during the early elementary grades and, unfortunately, most reading improvement programs stop at that level. The student must recognize that development in reading is a gradual process which should not be halted in the elementary grades. Today's complex society demands that each person develop effective reading habits as a means to skillful communication. To become an effective, more mature reader an individual must develop proper reading skills.

COMPREHENSION

Comprehension is the most important factor in reading. It is, however, relatively hard to measure. If comprehension is defined as the "ability to understand what is seen or heard," then the basis of comprehension becomes the sum total of all the experiences and training that an individual has had. Comprehension is usually classified as being either receptive or reflective.

Receptive comprehension of written material involves a literal understanding of an author's surface meaning. To understand accurately, a person must have an adequate vocabulary and must be capable of grasping the intended significance of an author's words and sentences. He must also be able to concentrate. Words convey only surface information to the reader.

Reflective comprehension of written material deals with a reader's ability to

determine the author's full meaning and to draw desired inferences from what he reads, as well as applying significant ideas to new situations. A reader must first understand surface information before he determines purpose and meaning. Reflective comprehension involves comparing what the reader knows about a subject with the author's presentation and deciding which of the latter's points to accept or reject.

Comprehension is considerably sharpened by an increased awareness that receptiveness and reflection are important aids to mental growth and improved communication. Reading comprehension depends upon concentration and the ability to grasp ideas and store them in the mind. The effective reader organizes his approach to ideas to grasp the full meaning of written material. A skilled reader opens a book and charts his way before he starts to read just as a writer does before he starts to write. A 3-step method for charting reading to improve comprehension follows.

1. IDENTIFICATION

First condense the book's message into a single statement or a short paragraph. Publishers and authors provide signposts that highlight objectives of books in titles, forewords, book jackets, prefaces, preludes, etc. Then each part must be analyzed, using the table of contents as an outline of what is to be read. Last, skim the material in the first chapter. Here the author establishes a pattern to be followed in subsequent chapters. Here the writer notes the importance of his subject, relates it to other areas, defines terms, establishes principles, and indicates his writing style. This identification step assists a reader in organizing the thoughts in the book to be read.

2. INTERPRETATION

The second step is to search for meaning when reading. This involves recognizing an author's frame of reference, his propositions, and the supporting evidence which is used.

FRAME OF REFERENCE. Knowledge of the author's background helps to establish a book's viewpoint. The reader may go to the book's index and select a few topics of personal interest. Then by reading these passages and noting the author's treatment of them, and the completeness of this treatment, the point of view will become clear and assist in comprehension.

DETERMINE AUTHOR'S PROPOSITION. Whatever the book, the reader must find the propositions that support the book's thesis. For example, in John F. Kennedy's book, *Profiles in Courage,* he proposes that it takes a special kind of courage to be a responsible politician and public servant. He also proposes that we sometimes criticize our congressmen and other political figures too harshly and tend to forget the examples of personal sacrifice endured by many of those in public office who stick to their principles and do what they think is right, regardless of personal or political consequences.

FIND SUPPORTING EVIDENCE. A good writer supports his major propositions. Facts, statistics and reasoning are the evidence that supports main ideas. In John Kennedy's book, he supports his propositions by citing from history examples of outstanding loyalty and self-sacrifice displayed in the lives of members of the United States Senate.

One aid in finding supporting facts is for a reader to recognize that the paragraph is a cluster of sentences around a central idea. Many writers follow such a pattern by placing the key propositions in the initial sentence

and then using the complete paragraph for emphasis.

3. EVALUATION

The final step in charting reading is to evaluate the written material, based on the reader's understanding of the complete book. When a reader understands a book, he then agrees or disagrees with the author. If the reader disagrees, he should ask himself why doesn't he accept the main thesis? Did the author use illogical reasoning? Were the facts and statistics inaccurate and outdated? Were generalizations based on small samplings? Reaching a decision on these questions completes the 3-step method for effective, critical reading.

READING RATE

How fast should a person read? A few years ago, "speed reading" was a national fad and numerous courses dedicated to it came into being. This pace has now slackened and controversy has developed about speed reading practices. The major dispute in speed reading concerns the contention that it is possible to read at thousands of words per minute. A further division exists between those who favor the use of various mechanical devices to speed up reading and those who feel the machines are worthless. Reading experts do agree, however, that the average reader plods along at a slow rate and that improvement can be made. Some reading laboratories report that the average person, after 20 hours of practice, has been able to increase reading speed from 60 to 100 percent, and comprehension from 6 to 10 percent.

Each individual has the potential to read at a faster rate, but hard work and practice are necessary for improvement. Professor Paul Witty, reading specialist, Northwestern University, estimates that the average college graduate uses only about twenty percent of his reading capacity. He suggests that merely by trying harder, the reader can double his customary reading speed without any loss of comprehension.

Increasing Span of Recognition

The reading of a line of written material is not accomplished by a continuous sweep of the eyes across a page. The eyes move and then pause several times as they cross a line, and reading occurs during the stops between movements. The frequency of the stops, called "fixations," is determined by the eye span, or the "span of recognition."

When the span of recognition is increased, fewer fixations per line occur; the result is increased speed. For example, when a fast reader reads *Time* magazine with full comprehension, he generally makes only two fixations per line. A slower reader may make five fixations per line in reading the same material. A fast reader takes in three or four words per fixation, whereas the slow reader may stop on every word.

With practice, the span of recognition can be increased. A handy medium for practice is the daily paper. Since newspapers are printed in narrow columns, it is possible to increase the eye span sufficiently to read each line with a single fixation, that is, to read straight down the column. Daily practice of this kind increases span of recognition.

A slow reader not only makes more fixations than a fast reader, but also takes more time on each fixation. By forcing himself to read at a rate that is actually uncomfortable, a reader can cut down on his fixation time. The drop-shutter machines used in laboratories can be set to push readers to much faster rates. A person who does not have access to a drop-shutter ma-

chine can force himself to shorten his fixation time. Using a watch with a second hand, he should first time himself in minutes and seconds while reading a page. He should then attempt to read each succeeding page at faster and faster rates. Comprehension does not need to diminish as speed increases. In fact, increases in comprehension usually accompany increases in speed.

Eliminating Regressions

When a reader's eyes move back toward the left side of a page to fix again on a word, he is regressing. Regressions hold reading speed down. The good reader makes a few regressions; the slow reader makes many. Of course, some regressions are necessary to reexamine an unfamiliar word or to study the structure of a confusing sentence.

If a reader lets his mind wander while reading, he has to regress to pick up what he has missed. Reading laboratories use pacing machines to prevent regressions. By concentrating intently on what he reads, the reader himself can control his habit of regressing. If the reader goes too slowly to keep his mind occupied, he forgets what he has read. Then he has to regress to pick up the thread of the author's thought. The good reader keeps his eyes moving and his mind interested. He keeps himself too busy for woolgathering and consequently does not make unnecessary regressions.

Eliminating Subvocalizations

Subvocalizing is another serious reading fault. Most people are taught to read aloud before reading silently. Upon beginning to read silently, they continue to vocalize, but silently. As they pronounce silently each word, they read no faster than when they read aloud. Few adult readers actually form syllables with their lips, but many either form the syllables in their throats or pronounce the sound mentally. This habit limits a reader's speed in silent reading to the rate at which he can form or listen to spoken words. Since few people can read aloud more than 250 to 300 words per minute, the subvocalizer is tied to that speed.

Subvocalizing can be overcome. The reader who vocalizes his eyes, his lips, his throat, and his brain. The good silent reader uses only his eyes and his brain. If the reader's throat muscles vibrate as he reads, he is using those muscles to say words silently. Chewing gum or humming while reading may help a reader overcome the habit of subvocalizing. When a reader works his rate up to about 400 words per minute, he subvocalizes less and less. Continued practice at high speed will eventually free the reader of this restraining habit.

Overcoming Vocabulary Difficulties

Vocabulary can be improved in many ways. Probably the best way is to read widely. New words often become clear when read in the context of a sentence or paragraphs, as do new meanings for old words. One aid in building up a vocabulary is to look up new words in a dictionary, list them, and use them often. The person who acquires new words and new meanings for old words can read steadily and swiftly if he makes these words an active part of his reading vocabulary. Words are functions of thought, and by handling complicated thoughts in reading, a person can develop and strengthen a useful vocabulary.

Adaptability

Adaptability, adjusting speed to the level of the reading material, is the key to effective reading. The reader should be able to gear his speed to the importance and the difficulty of his read-

ing material. The habit of reading everything at the same speed is a certain sign of an immature reader. Every reader should frequently check to make sure that he is adapting his speed and comprehension to his reading material and his purpose in reading.

Adaptability and discrimination go hand in hand. The discriminating reader knows what to read to get the results he wants. He carefully chooses what he reads. It is important to decide in advance what is to be gained from reading and then to read in the most efficient manner to fill this need. There is little point in reading rapidly just to get through material, and little profit in reading so slowly that valuable time is wasted. Materials that must be thoroughly understood should be read with critical attention to detail. It is worthwhile to slow down, think about, and savor excellence in style, description, or narrative. When reading for general information, however, speed can save valuable time for the reader without robbing him of the information that he seeks.

Most people can develop the ability to increase rate and comprehension. The key to efficient reading practices is the adaptability or flexibility in adjusting reading rate to the material and to the purpose in reading. The main causes of slow reading are a short span of recognition, regressing, subvocalizing, and an inadequate vocabulary. Everyone can increase his rate of reading without reducing comprehension.

The following suggestions will help each person improve his reading:

*Try to get something out of reading. Read with a purpose.

*Read at a forced pace to eliminate daydreaming.

*Vary reading rate to suit purpose. Types of material dictate reading speeds.

*Look for main ideas in reading to aid comprehension.

*Do not read words one at a time—read groups of words for key thoughts.

*Be word-conscious—a large vocabulary enables one to be a more efficient reader.

*Try to keep from regressing; the efficient reader concentrates on the material.

*Eliminate movement of lips and throat muscles when reading. Subvocalization restricts reading speed to rate of speech.

*Read more to develop broader interests, to become a better reader.

*Be relaxed when reading.

WRITTEN COMMUNICATION

Napoleon is said to have kept promoting one of his officers, much to everyone's surprise and chagrin. Finally, when a high ranking officer asked Napoleon why he kept promoting this simple minded fellow, the General replied, "When I write an order, I give it to him to read. If he understands it, then anyone in the field can understand it. You see how valuable he is to me." True or not, this incident dramatizes the importance of clear, straight-forward written communication.

It is not the purpose of this manual or of the JROTC curriculum to teach you the skills associated with good writing. You have courses in English that provide such instruction. What we do want to do here is to acquaint you with several types of written communication that the Marine Corps uses. We will discuss the Naval letter format, the report, and the brief.

NAVAL LETTER FORMAT

The Marine Corps, like most big businesses, conducts its day-to-day transactions through letters and interoffice communications. Thousands of letters are written within the Marine Corps each day. If each letter were to take but four hours to plan, write, type and read, the total number of man-hours consumed during a year would be tremendous. To reduce this expenditure of time and to improve communications in general, the Navy and Marine Corps have adopted a simple, standardized letter format. By using this format, the JROTC cadet can learn to write an official letter.

Study briefly the illustration of a letter shown in the accompanying figure. You will see that it is a simple and efficient way to communicate. Its appearance immediately tells you what it is. The letterhead tells at a glance where it came from. The subject of the letter and person for whom it is intended are indicated under those captions. The date it is sent is also indicated.

The body of the letter, in numbered and lettered paragraphs, is the heart of the letter. It is the why and how part that goes along with the who, what, when, and where answered in other parts of the letter. The body should be short and simple, but correct and complete. Make sure the body contains no more words than necessary, and says no more than needs to be said. For example, following are two versions of a letter. The first version is stilted, wordy, and exasperating to the extreme—a typical example of the worst letter-writing habits. The second version is a sound, concise letter, saying the same thing as the first, but in a readable manner. Read them and you will see what we mean.

First version

1. This will acknowledge receipt of your letter dated 27 May 69, inclosing an application for correction of your military records and stating that this application was previously submitted to this headquarters on 25 April 69, but was returned without evidence of any action having been taken thereon.

2. A thorough search of the records of this office indicates that you are correct in your assumption that no action has been taken on the application in question. Therefore, it would appear that due to an inadvertency, you were not informed that the application failed to meet the requirements for evidence in accordance with Regulation .....
Accordingly, it is necessary that this Office again return it with a supplementary form attached.

3. If you desire to reapply, it is necessary that the supplement be completed in accordance with the instructions printed thereon, appended to the original application, and returned to this office at the address shown above. When the form is received in this office, properly completed and duly executed, you may be assured that prompt action will be taken.

4. Any inconvenience you may have been caused is sincerely regretted.

Second version

1. The enclosed form is forwarded in response to your letter of 27 May 69. When we returned your application dated 25 Apr 69, we should have explained that we need more information, as indicated on the attached supplemental form.

2. We regret causing you more delay; however, we must have all the facts before we can process your

*ASTERISKS INDICATE ITEMS THAT MAY NOT BE REQUIRED

UNITED STATES MARINE CORPS
EDUCATION CENTER
MARINE CORPS DEVELOPMENT AND EDUCATION COMMAND
QUANTICO, VIRGINIA 22134

IN REPLY REFER TO

*"Refer to" line
Originator's code
*File number
Date

*SPECIAL POSTAL SERVICE

From: Title of head of activity preparing letter, name of activity location or mailing address if necessary
To: Title of head of activity receiving letter, name of activity, location or mailing address if necessary
*Via: (1) Title of head of activity whose endorsement is required, name of activity, location if necessary (not numbered if only one)
(2) Title of second "Via" addressee, etc., if any

Subj: Brief topical statement of the subject of the letter

*Ref: (a) Citation of a letter or other written document, official short title of originator, location of activity if not indicated in title, the abbreviation "ltr", the identification symbols, of (date)

*Encl: (1) Material enclosed with letter, identified in the same manner as references (number of copies if more than one)

1. Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Xxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Xxxxxxxxxxxxxxxxxxxx.

2. Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Xxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Xxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx.

a. Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Xxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Xxxxxxxxxxxxxxxxx

(1) Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Xxxxxx xxxxxxxxxxxxxxxxxx. Xxxxxxxxxxxxxxxxxxxxx.

(2) Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Xxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx.

b. Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Xxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Xxxxxxxxxxxxx.

Sample Format for an Official Letter.

Originator's code
*File number

*Subj: Repeated from first page

3. Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Xxxxxxxxxxxx
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5. Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Xxxxxxxxxxxx
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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Xxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxx. Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Xx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx.

NAME OF SIGNING OFFICIAL
*By direction

*Copy to:
Title of information addressee
Title of second information addressee

*Blind copy to:
List of information addresses not
shown on original

Prepared by:
Drafter's activity and name; typist's initials; date
of typing
*Room number; telephone extension

Page Number

Sample Format for an Official Letter (cont.)

case. Resubmit your application with the supplemental information, and we shall see that it gets prompt and careful attention.

Believe it or not, while the second version is much easier to read, it is not necessarily easier to write. Practice at writing accurate and concise letters is the best way to improve. Mastery of the ability to write good letters will be useful to you throughout your life.

REPORTS AND BRIEFS

Reports. An officer or a group of officers is often required to investigate a situation and prepare a report on it. A commanding officer cannot personally study each problem that falls under his jurisdiction. In order to get necessary information on each problem before having to make a decision on it, the commander will assign a member of his staff to conduct a study and prepare a report of it. This report can be a fact-finding report, performance report, technical report, position paper, staff summary sheet, or a staff study report.

The staff study is a problem-solution type of report. It presents collected data, discusses possible solutions to the problem, and indicates the best solution. It is not only a form for solving a problem, but for presenting a solution. The one who prepares the staff study should mentally solve the problem, then report the solution in writing.

Written Briefs. Whenever a busy commander picks up a piece of paperwork that comes across his desk, he mentally asks certain questions: What is this? Where did it come from? Who has seen it and agreed with it? What action should I take? What happens if I do take action?

The commander needs to get the necessary background and details on matters which come to him for action. He also needs to conserve his time for the function that is uniquely his—making decisions. You can help your commander meet both these needs by forwarding one-page communications along with proposed problem solutions, answering all the questions in the above paragraph.

This one-page written communication is called a summary or covering brief. Its form varies with individual organizations or situations. It may be in the form of an interoffice communication or on a form specifically prescribed for this purpose. Regardless of name or format, it has the same requirements. It should be accurate, brief, and clear, and it should be reviewed by other staff members before it goes ahead to the commanding officer. In this way the commander has a complete picture of the situation in brief, and he knows that the problem has had the best thinking of his staff. He is prepared to take the necessary action.

PASS IN REVIEW

The art of communication is the most complex skill which man has mastered; it is his ability to conceive an idea and share it with others which establishes him as the superior of the animal species. The manipulation of words and other symbols for thought in such a manner as to be effectively understood by the recipient, is absolutely essential to one who would lead. The depth of your knowledge and the brilliance of your design is lost if you are unable to communicate to others that which is necessary in order for those you lead to execute the plan. The conversion of thought to the verbal language is in itself a difficult task. Further conversion of the verbal word, which is a symbol for an idea, to the written word, a symbol for a symbol, is a task of immense difficulty. For this reason we often tend to ignore the work required to improve our listening and reading skills in order to concentrate on practicing our speaking and writing skills. But to learn to pass information is equally important, and absolutely necessary for complete communications.

a. Draw a comparison between personal communication and electronic communication.

b. Explain how to evaluate whether or not your communication is effective.

c. Describe the influence one form of communication may have on another form; i.e., how nonverbal language affects verbal language.

d. What is the relationship between effective communication and attitude?

e. Outline the procedure for preparation of a speech.

f. How can a person learn to "listen louder"?

g. Explain why there is a need for everyone to develop more rapid reading skills with improved comprehension? How can such improvement be accomplished?

h. List some different forms of written communication.

CHAPTER 7

MILITARY INSTRUCTION

Military instruction is one of the most important functions of the Marine officer or noncommissioned officer. A good leader does not try to do the work of his subordinates, but he can help them by teaching them how to do a job. By teaching his skills to his men, he can multiply those skills by tens, hundreds, even thousands. Think of that. A skillful and competent leader who is also a competent instructor can multiply his influence by passing his knowledge and skills on to his men.

Much of your life you have been on the receiving end of instruction. As a cadet upperclassmen you will be expected to assume the instructor role from time to time. You may be called upon to assist your Marine Instructor with his presentation, or you may have

to present basic instruction on your own to other cadets. When your turn comes to instruct, consider it an opportunity to help other cadets by giving them the benefit of your knowledge and experience.

As a cadet instructor you will be practicing a skill that will be useful to you in the future. Formal teaching and learning do not end when you graduate from high school or college. Whatever occupation you choose after graduation, you will often find yourself in a teaching or learning situation. Most business organizations and all military organizations have training programs to insure standard procedures, mutual understanding, and overall efficiency. This is the method used by executives and commanders to pass on the why, what, and how of the job to be done. The principles and techniques of instruction that you learn as a cadet will serve as useful tools in many leadership situations you will encounter in the future.

ROLE OF THE INSTRUCTOR

If you have never been called upon to be an instructor, you may be concerned about what an instructor has to do. Although there are many techniques and methods of instruction, the instructor's job boils down to three basic functions. They are to: (1) initiate learning, (2) guide learning toward the desired goal or goals, and (3) measure that learning to determine not only what has been accomplished, but what else may be needed to bring students to the desired level of skill and knowledge. If you can do these three things well, you will be an effective instructor. Let us look at these functions a little closer.

To Initiate Learning. The instructor must realize that it is the students who do the learning. The instructor cannot teach if the students are not ready to learn. The instructor must create a situation that makes the students want to take an active part in the learning process. He must build up in his students a desire to learn. He must not assume that just because he is "teaching" that the students are "learning." The Instructor must not only lead his students to water, but make them thirsty.

To Guide Learning to Desired Goal. Once the instructor has developed a thirst for learning in his students, he must lead them, step-by-step, to the desired objective of the instruction. If the goal is for the students to be able to disassemble and reassemble the M–14 rifle, the instructor should plan his instruction so that every step that he teaches will help them to learn this skill. It would not help, but would probably be distracting from the original goal, if the instructor tried to teach sight adjustment or trigger squeeze while the students were still struggling to reassemble the barrel and receiver group. The instructor must begin with what students already know and advance in a logical manner to what they don't know. He takes them from the familiar to the unfamiliar, from the simple to the complex. He should not try to cover too many things at once. By establishing simpler, and more easily learned intermediate objectives, the instructor not only helps the student see the overall objective better, he allows the student to achieve a feeling of accomplishment early in the learning process. If you threw all of the parts of an M–14 rifle on a table, and tried to tell your students how to put if back together, without pausing to demonstrate the various steps, they would be totally confused. You could not expect them to be able to perform the task after you had completed your "lesson," although you might have covered every

detail of the process in your description. You must guide them step-by-step.

To Measure Learning. To evaluate the effectiveness of the instruction, the instructor must have some way to measure the progress of student learning. For the kind of instructing you will do as a cadet, you will measure progress most often by observing how well students perform. If you are teaching new cadets the proper way to do an "about face," you will be able to tell by observation how well they are learning. Measuring the progress of learning enables the instructor to adjust his teaching to the rate of learning of the class. It lets him know when to move on from one step to the next, or when to go back over a previous step that students are slow to grasp. A more formal method of measuring progress is by examination. You are probably more familiar with the written examination, but examinations may also be given orally, or by demonstration of a particular skill.

CHARACTERISTICS OF A GOOD INSTRUCTOR

There are many combinations of characteristics that can be found in good instructors. It is impossible to mention them all here, but there are a few characteristics that are essential. These are the characteristics that you should try to develop. Your other personal qualities will emerge naturally.

Knowledge of the Subject. It is obvious that the instructor must know his subject if he is to teach it to others. Practical experience in his subject area also helps the instructor, but this alone will not make him a good instructor. The good instructor will want to learn as much as possible about his subject. He should know more about his subject than he will have time to teach. He should be prepared to answer nearly every question that a student might ask about the subject.

Knowledge of Teaching Techniques. There have been many good players who did not make good coaches. The ability to perform a skill does not guarantee that you can teach that skill to another person. Practice of good teaching techniques make the difference between the good player and the good coach. Some of these techniques will be covered in the section, "How to Instruct."

Positive Attitude. The attitude of the instructor has a tremendous influence on the attitude and interest of the students. They tend to adopt both the attitude of the instructor and his point of view of the subject. If he is not enthusiastic about his subject, the students will not think it is very important. The instructor's appearance, his preparation and knowledge, and the interest he shows in his students tells them what his attitude is about the class. The instructor should try to develop those characteristics that promote a positive attitude, such as enthusiasm and sincerity. He should avoid those that interfere with effective instruction, such as indifference or an air of superiority.

RELATION TO STUDENTS

To be successful, the instructor must have the respect of his students. He gains their respect by displaying a good appearance, a thorough knowledge of his subject, and a sincere and genuine interest in the students as individuals. He recognizes the individual differences of his students—differences in experience, attitude, and ability to learn. He tries to talk to his students on their level and avoids

talking in terms they do not understand. The following hints for instructors will help you maintain good relations with your students.

1. Do not bluff to cover lack of knowledge. An instructor must know his subject thoroughly, but even then there will be questions he cannot answer. If he does not know the answer he should admit it, find the correct answer, and give it to the class as soon as practicable.

2. Do not use slang or profanity. When the instructor uses profanity, he loses dignity and class respect.

3. Do not be sarcastic or ridicule members of the class. This builds resentment. When a person is resentful, his mind is closed to learning.

4. Do not talk down to a class. The instructor should make the class feel that he considers himself fortunate to have acquired the knowledge and experience he wishes to share with fellow cadets.

5. Do not lose patience. Slowness or apparent inability to learn may mean that the instructor will have to use other methods or techniques.

HOW WE LEARN

The expert instructor must be the master of many skills. What he teaches requires an extensive knowledge of the subject matter. How he teaches depends largely on his understanding of how people learn, and his ability to apply that understanding. This whole field of how people learn is called educational psychology. However, this chapter is concerned only with that area dealing directly with the learning process.

WHAT IS LEARNING?

One of man's outstanding characteristics is that he is a learner. He learns continously from the time he is born until he dies. Learning can be defined as the process of acquiring new knowledge, skills, techniques, and appreciations that will enable a person to do something that he could not do before. Learning can also be defined as the change that takes place in the individual as a result of his experiences. A learning experience may change a person's way of thinking, feeling, or acting. This behavior can be physical, or it can be mental. Mental behavior is not easily observed, but psychologists generally agree on some characteristics of learning. The instructor should understand these and put them to good use.

CHARACTERISTICS OF LEARNING

Learning is purposeful. Each student sees the classroom situation from a different point of view, because he is a unique individual. His past experiences affect his readiness to learn and his understanding of what is required. Most people have some ideas about what they want to do and achieve. Some of these goals are short term, a matter of days a weeks. Others may be carefully planned goals for a career or a lifetime. The student brings his purposes and goals into the classroom. Some of his purposes may be his alone, and others may be shared with his classmates. A student learns from any activity that tends to further his own purposes. His individual needs and desires may determine what he learns just as much as what the instructor is trying to get him to learn. One of the reasons for the popularity of driver education courses in high school is that the student sees a clearly defined purpose in the instruction. His purpose may not be the same as that of his instructor, however. The purpose of the

instructor may be to promote highway safety, while the student is interested in meeting the requirements for a drivers license so that he may be permitted to drive the family car. The effective instructor looks for ways to relate new learning to the student's goals. He helps the student find a reason to learn.

Learning Comes Through Experience. Learning is an individual process. The instructor cannot do it for the student. He cannot pour knowledge into the student's head. The student can learn only from what he experiences himself.

A person's knowledge is a result of his experience, and no two people have identical experiences. Even when observing the same event, two people will learn different things from it. What they learn will depend upon previous experiences and their own individual needs. Previous experiences cause a person to respond to some things and to ignore others. An experienced sailor is always alert to even the slightest indication of change in the weather. He learns to predict the coming of a storm by observing subtle changes in cloud formations. The city dweller tends to ignore these same signs, because his safety does not depend upon his ability to predict the weather. The instructor must provide learning experiences that are related to the student's previous experiences and which the student will recognize as useful to him.

The learning of a physical skill requires actual experience in performing that skill. A person learns to swim only if his experiences include getting into the water and swimming. Mental habits are also learned through practice. If the cadet is to use sound judgement and solve problems well, he must have learning experiences in which he can exercise judgment and apply his knowledge of the general principles of solving realistic problems.

Learning is Many-Sided. In the process of learning, the student may learn many things that the teacher had not intended. It is impossible to isolate one skill or idea from other related skills and ideas. In learning the disassembly and reassembly of a weapon, for example, the student is also developing manual dexterity and probably will discover some things about the functioning of the weapon. If the instructor sees his objectives as being only to train the student's memory or muscles, he is neglecting much of the potential of the teaching situation. A class learning to apply the scientific method of problem solving may be learning other things as well. They may be learning cooperation and group dynamics. They may be developing attitudes—good or bad, depending on what they experience. This is sometimes called "incidental learning," but it may have a great influence on the total development of the cadet. The purpose of this chapter is to make you a better cadet instructor, but what you learn about the learning process should also make you a better student.

Learning is an Active Process. The student does not soak up knowledge like a sponge absorbs water. The instructor cannot assume that the student remembers a thing just because he was present in the room when the instructor "taught" it. Neither can he assume that the student can apply what he knows just because he can quote the correct answer from the book. For the student to learn, he must react and respond. This response may be physical or mental, but if learning is a process of changing behavior, it must be an active process. The instructor must create situations and experiences that will cause the student to react and respond. He must get the students

involved in the active process of learning.

TYPES OF LEARNING

The product of student learning may be divided into three types: (1) knowledge, (2) skills, and (3) attitudes. Knowledge is an awareness of facts. Skills are physical and mental abilities. Attitudes include preferences, values, ideals, and appreciations. Learning how the M–14 rifle functions is knowledge; learning to disassemble it is a skill; and learning to handle it always in a safe manner is an attitude. Most of what you will be called upon to teach can be classified in one of these categories. Your method and technique of instruction will often depend upon whether the objective of your lesson is the learning of knowledge, a skill, or an attitude.

LAWS OF LEARNING

One of the pioneers in educational psycholgy was Professor Edward L. Thorndike, Teachers College, Columbia University, New York. Early in this century Professor Throndike postulated several "laws" of learning. These rules or principles seemed generally applicable to the learning process. In the years since, other psychologists have found that learning is a more complex process than some of these "laws" suggest. While Professor Thorndike's laws seem to have significant exceptions, they still provide an insight into the learning process and are included in this chapter for that reason.

The "laws" that follow are not necessarily as Professor Thorndike stated them. During the years they have been restated and supplemented, but in essence they may be attributed to him. The first three are the basic laws: the law of readiness, the law of exercise, and the still generally accepted law of effect. The following three laws were added later as a result of experimental studies: the law of primacy, the law of intensity, and the law of recency.

LAW OF READINESS

A person learns best when he is ready to learn, and he does not learn much if he sees no reason for learning. Getting a student ready to learn is usually the instructor's responsibility. If a student has a strong purpose, a clear objective, and a well-fixed reason for learning something, he makes more progress than if he lacks motivation. Readiness implies a certain amount of eagerness. When a student is ready to learn, he meets his teacher at least halfway, and this simplifies the teacher's job.

Under certain circumstances, the teacher can do little, if anything, to inspire in a student a readiness to learn. If outside responsibilities, interests, or worries weigh too heavily on a student's mind; if his schedule is overcrowded; if his personal problems seem insoluble; a student may have little interest in learning. Health or personal problems can also affect a student's desire to learn.

LAW OF EXERCISE

This law states that those things most often repeated are best remembered. It is the basis of practice and drill. The human memory is not infallible. The mind can rarely retain, evaluate, and apply new concepts or practices after a single exposure. A student does not learn touch typing at one sitting. He learns by applying what he has been told, and every time he

practices, his learning continues. The teacher must provide opportunities for students to practice or repeat, and he must see that this process is directed toward a goal. Repetition can be of many types, including recall, review, restatement, manual drill, and physical application.

LAW OF EFFECT

This law is based on the emotional reaction of the learner. It states that learning is strengthened when accompanied by a pleasant or satisfying feeling, and that learning is weakened when associated with an unpleasant feeling. If an instructor tries to teach swimming in a pool that is so cold that it is uncomfortable, the students are not likely to be highly motivated. The students will feel more comfortable and will get more pleasant sensations if the water is of moderate temperature. It is easy to guess which situation would be more suitable for learning to swim. Likewise, an experience that produces feelings of defeat, frustation, anger, confusion, or futility in the student is unpleasant for him. This can happen when the instructor introduces material that is too difficult for the level of experience of his students. They are denied any feeling of success or accomplishment and they stop trying to learn. Every learning experience does not have to be entirely successful, nor does the student have to master each lesson completely. But a student will learn more easily if the learning experience is pleasant.

LAW OF PRIMACY

Primacy, the state of being first, often creates a strong, almost unshakable impression. For the teacher, this means that what he teaches must be right the first time. For the student, it means that his learning must be right. "Unteaching" is more difficult than teaching. If a new piano pupil learns incorrect finger positions, his teacher will have a difficult task in unteaching the bad habits and reteaching good ones. Every student should be started right. His first experience should be positive and useful so that if can prepare him and lay the foundation for all that is to follow.

LAW OF INTENSITY

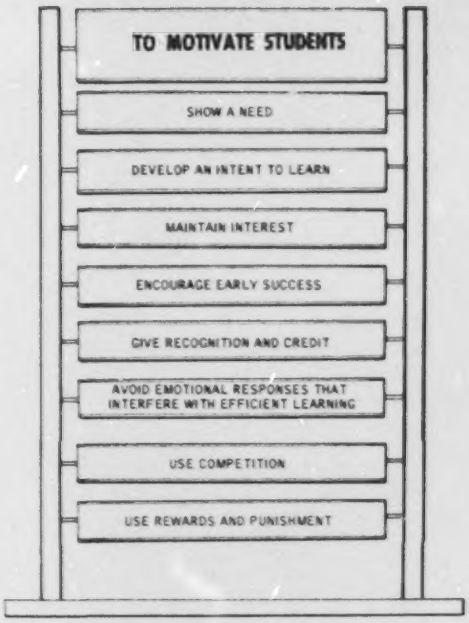
A vivid, dramatic, or exciting learning experience teaches more than a routine or boring experience. A student of literature is likely to gain greater understanding and appreciation of the play *Macbeth* from seeing it performed than from merely reading it. He can learn more about firefighting from watching someone fight a fire than from listening to a lecture on the subject. The law of intensity, then, implies that a student will learn more from the real thing than from a substitute. Since the classroom imposes limitations on the amount of realism that can be brought into teaching, the teacher should use imagination to approach reality as closely as possible. Mockups, colored slides, movies, filmstrips, charts, posters, photographs, and other audio-visual aids can add vividness to classroom instruction. Demonstrations, skits, and panels do much to intensify the learning experiences of students.

LAW OF RECENCY

Other things being equal, the things most recently learned are best remembered. It is easy, for example, to recall a telephone number dialed a few

minutes previously, but it is usually impossible to recall an unfamiliar number dialed a week earlier. The instructor recognizes the law of recency when he carefully plans a summary for a lesson or an effective conclusion for a lecture. He repeats, restates, or reemphasizes important points at the end of a lesson to make sure that the student remembers them.

All the laws of learning are not apparent in every learning situation. These laws may operate singly or in groups, and for purposes of this chapter, it is not necessary to determine which law operates in what situation. However, if an instructor understands the laws of learning, he can deal intelligently with motivation, participation, and individual differences, three major factors affecting learning.



How to Motivate Students.

FACTORS THAT AFFECT LEARNING

MOTIVATION

The factor that has perhaps the greatest influence on learning is motivation, the force that causes a person to move toward a goal. This force can be rooted in any or all of the personal-social needs of the student; for example, the need for security, for new experience, for recognition, for self-esteem, for conformity, or the need to help others. Such needs compel people to act, to move, to start toward an objective, or to achieve a purpose. The instructor's responsibility is first to recognize and identify these needs in his students and then to seek ways of satisfying them through his teaching.

To be successful, the student must have a need to know, to understand, to believe, or to acquire a skill. The wise teacher realizes that these needs are not separate and distinct from the personal-social needs of the student. The instructor must make students want to learn, and in some cases, must remove obstacles that students have placed in the paths of their own learning. The student must have a reason for learning, and if he cannot find it for himself, the teacher must find it for him.

In his responsibility to motivate learning, the teacher can use whatever built-in motivations he finds in his students. The big challenge is to shape personal-social motivations to make them serve the learning situation. The teacher must first establish learning objectives and then activate forces that cause the student to work toward them. This is motivation.

INDIVIDUAL DIFFERENCES

Do not be discouraged when you discover your well-planned lesson does not

reach all of your students with equal clarity. This is a natural and predictable state of affairs in teaching. Students seldom learn at the same rate. Differences in rates of learning are based on individual differences in students. These differences include native intelligence, background, experience, interests, desire to learn, and countless other psychological, emotional and physical factors. These individual differences will have an influence on how much you can teach, at what rate, and when.

By keeping your class on a close, personal basis, you will be able to measure each student's understanding of the lesson. Encourage questions from the class, and use class discussion to clear up misunderstandings. Have a list of prepared questions that you can use to test class understanding of the lesson. These questions may be given orally by calling on members of the class, or you can prepare a short written test to give to the entire class. Discussing the answers to these questions in class will not only enable you to measure the understanding of the lesson by the students, but will reinforce their learning.

As you become aware of the differences among members of your class, it will be a challenge to you to try to equalize their different levels of understanding. Ideally, you will want to raise the level of some students without retarding the progress of others. By varying your presentations to include techniques and approaches that will appeal to a variety of students, you will be able to reach more of them. Make use of demonstrations, discussions, visual aids, and any other means that will help you to achieve your lesson objective with the majority of the class, despite their individual differences.

PARTICIPATION

Students learn best when they are active. Participation in a lesson is action. This action profoundly influences learning. Because the competent teacher realizes that idleness, either mental or physical, is detrimental to learning, he plans a variety of activities for his students. Activity takes many forms: thinking, listening, observing, recalling, reasoning, generalizing, imagining, writing, discussing, answering, questioning, believing, disagreeing, feeling, touching, moving, doing, and speaking. All of these help the student learn.

Whatever the activity, the effective teacher makes sure that his students have something to do. There is a correlation between doing and learning. How much a student learns is in direct ratio to how much he does, or how much he becomes involved in what he does. Stated simply, the more of the five senses a student uses to learn something, the more effective his learning will be. Consider flag-folding as an example.

A student can learn how to fold a flag simply by reading about it. He cannot, however, learn this skill as effectively as he could if, in addition to reading about it, he has someone explain it to him. The instruction could go a step further to provide a demonstration of flag-folding. Following that, the student might actually fold the flag. In each step of the instruction he uses another sense, adds another dimension, and consequently learns more. Finally, he might be asked to write all he knows about flag-folding, or better yet, to teach someone else how to fold a flag. In this complete sequence, the student progressively uses as many senses as can be used in learning to fold a flag.

This kind of participation can make

learning permanent. A student who is required to think imaginatively and reflectively learns more than one who merely absorbs knowledge passively. A student who learns through his senses of touch, taste, sight, sound, and smell, learns better than if he learns through one sense alone. If a student reads something, then thinks about it, questions it, writes it down, talks about it, and listens to what others say about it, his learning is more effective than if he merely reads and stops there. Since participation improves learning, it is the instructor's responsibility to make participation possible.

An instructor can encourage students to take notes. He can pose problems and require solutions. He can assign writing, reading, and research projects; form discussion groups; invite disagreements; and require students to evaluate one another's work. All of these are forms of participation that enhance the student's chances of learning success. The instructor who can keep his students participating will keep them learning.

RETENTION

This section and the next deal with two related aspects of the learning process: retention of learning and transfer of learning. In some ways it is difficult to separate the two. Generally, transfer of learning means taking a thing out of its learning environment, and using it in another situation. Obviously, a student cannot transfer his learning to a new situation unless he remembers it. Therefore, what the instructor does to help a student remember also helps him to transfer his learning.

THEORIES OF FORGETTING

A consideration of why people forget may point the way to helping them remember. Several theories account for forgetting.

Disuse. It has long been argued that a person forgets those things which he does not use. The high school or college graduate is saddened by the small amount of factual data he retains several years after graduation. Since the things he does remember are those he uses in his job, he concludes that forgetting is the result of disuse. But the explanation is not quite so simple. Experimental studies show, for example, that a hypnotized person can describe specific details of an event which he is not normally able to recall. Apparently the memory is there, locked in the recesses of the mind. The difficulty is in summoning it up to conscious thought.

Interference. One theory holds that people forget a thing because a certain experience has overshadowed it, or that the learning of similar things has intervened. This theory might explain how the range of experiences after graduation from school causes a person to "lose" knowledge. In other words, new events displace many things that had been learned. From experiments, two conclusions about interference may be drawn: (1) Closely similiar material seems to interfere with memory more than dissimilar material. (2) Material not well learned suffers most from interference.

Repression. Freudian psychology advances the view that some forgetting is due to the submersion of ideas into the unconscious mind. Material that is unpleasant or produces anxiety may be treated this way by the individual, but not intentionally. It is subconscious and protective. The repression theory does not appear to account for much forgetfulness of the kind discussed in this chapter, but it does tend to explain some cases.

RETENTION OF LEARNING

Each of the above theories implies when a person "forgets" something, it is not actually lost; rather it is unavailable for recall. The instructor's problem, then, is how to make certain that the student's learning is always available for recall. The following suggestions can help.

1. Teach thoroughly and with meaning. Material thoroughly learned is highly resistant to forgetting. Meaningful learning builds patterns of relationship in the student's consciousness. Whereas "memory work" is superficial and is not really retained, meaningful learning goes deep, because it involves principles and concepts anchored in the student's own experience.

2. Help the student understand a reason for remembering. A desire to remember increases the chances of remembering. It follows, then, that a lack of such a desire increases the chances of forgetting.

3. Help the student develop good study habits. Just as the teacher should teach meaningfully the student should be encouraged to study for meaning, not just for rote memory. The student should apply himself toward thorough understanding and proficient skills.

4. Help the student to develop an organized program of review. Short spaced periods of review, with opportunity for practice is probably the best of all.

TRANSFER OF LEARNING

During a learning experience, the student may be aided by things he has learned previously. On the other hand, it is sometimes apparent that previous learning interferes with the current learning task. Consider the learning of two skills, A and B. If the learning of A helps to learn B, positive transfer occurs. If learning A hinders the learning of B, negative transfer occurs. For example, the learning of addition probably helps the learning of multiplication; learning how to shoot a bow and arrow may help to learn how to shoot a rifle. On the other hand, learning to drive an automobile in U. S. traffic may hinder learning to drive in British traffic, because Britons drive on the left side of the road. For some people, the study of Spanish first makes it more difficult to learn French. It seems clear that some degree of transfer is involved in all learning. That is so because, except for certain inherent responses, all new learning is based upon previously learned experience. People interpret new things in terms of what they already know.

The cause of transfer and how it operates have not yet been identified and explained. But no one disputes the fact that transfer does occur. The significance of this ability for the instructor is that he can and should help the student achieve it.

The following suggestions are representative of what educational psychologists believe should be done:

1. Plan for transfer as a primary objective. As in all areas of teaching, the chance for success is increased if the teacher plans to achieve it.

2. Make certain that the student understands that what he learns can be applied in other situations. Prepare him to seek other applications.

3. Insure thorough, high-order learning. Over-learning may even be appropriate. The more thoroughly the student understands the material, the more likely he is to see its relationship to new situations. Avoid rote learning, for it does not foster transfer.

4. Provide meaningful learning experiences that build the student's confidence in his ability to transfer learning. This suggests activities that challenge him to exercise his imagination and ingenuity in applying his knowledge and skills.

5. Use instructional materials that help form valid concepts and generalizations. Use materials that make relationships clear.

This chapter is no more than an entry-level look at the field of educational psychology, which contains many significant areas. Learning is a change in behavior as a result of experience. Learning is purposeful and comes only through experience. Learning is multifaced; the learner's full set of learning equipment is always involved. Learning is an active process.

The laws of learning provide useful insights into the learning process. The law of effect is especially significant—it states that learning is strengthened when accompanied by satisfying or pleasurable conditions.

A knowledge of the laws of learning helps the instructor to understand and to take advantage of three factors that affect learning: motivation, participation, and individual differences. The student must have a need to know to understand, to believe, to act, or to acquire a skill. All of these needs, which make up motivation, are inseparable from the personal-social needs of the student. A student learns best when he is active, when he participates. When purposeful activity is associated with learning, it makes the learning more permanent. Because of differences in experience; background; intelligence; interests; desire to learn; and psychological, emotional, and physical factors, students learn at different rates. The instructor must recognize these individual differences and gear his teaching to reach all students, whatever their capabilities and abilities.

HOW TO INSTRUCT

Most of the instructing you will do as a MCJROTC cadet will involve teaching military skills to other cadets. This section will discuss the planning of a lesson, and the methods and techniques you will use to initiate learning and guide student learning to the desired lesson objective.

LESSON PLANNING

Every successful teacher knows that the price of excellence is careful planning. The effective instructor devotes much time and energy to the preparation of each classroom session. Only through careful planning can you be certain that you are including all necessary ideas and properly organizing the material and activities that will enable the students to achieve the desired learning. The process of lesson planning includes the following five essential steps: (1) establishing lesson objectives, (2) researching the topic, (3) organizing the material, (4) selecting the instructional method and (5) preparing the lesson plan.

ESTABLISHING LESSON OBJECTIVES

The first step in lesson planning is to establish the basic objectives of the lesson. Sometimes your lesson objectives, in broad terms, will be given to you when you get your instructional assignment. On other occasions you may have to determine what you will teach on your own. Your lesson objectives will serve three important purposes: (1) to define what you must

teach, (2) to let students know what they must learn, and (3) to serve as a means to evaluate what students have learned. Good lesson objectives will meet the following requirements:

Be Attainable. A lesson objective must be attainable within the period of instruction. The lesson objective, "Be able to perform all individual movements for squad drill," may be too broad to be realized within a short period of instruction. However, the lesson objective, "Be able to perform the facing movements required for squad drill," is more limited and can be attained by the average student during a short class period. By limiting your objectives to what you can reasonably expect most of your students to attain within the class period, you will increase your chances for success and avoid frustration and confusion on the part of your students.

Be Expressed in Terms of Specific Behavior. A lesson objective should be expressed in terms of specific behavior that the student can demonstrate, and the instructor can observe. It is a statement of what the student must be able to *do* or *perform* when he masters the objective. He may be asked to answer questions orally or in writing, or to perform a certain skill, or to solve certain kinds of problems. No matter which method you use, you can determine how well your students mastered the lesson only by observing their performance. Thus, the most important criterion of a lesson objective is that it *identifies the kind of performance* acceptable as evidence that the student has attained that objective. Contrast the following statements of objectives: "To be able to understand grid coordinates" and "Given the grid coordinates of a location on a map, to be able to point to that location on the map." The first statement does not tell the instructor or the student what the student will be doing to show that he has achieved the lesson objective. The second statement clearly indicates what the student will be doing to demonstrate his knowledge of the subject matter. The way to write a lesson objective that meets this requirement is to write a statement of one of your teaching goals and then rewrite it until it answers the question, "What must the student do to demonstrate that he has reached the desired level of learning?"

State Acceptable Standards. As a further means to clarify the meaning of a lesson objective, you may state the standards or levels of performance considered acceptable. For example, the following statement of a lesson objective tells the student the level of proficiency he is expected to attain—"Given illustrations of 20 map symbols, the student will be able to identify and write the meaning of at least 18 symbols." This objective leaves no doubt in the mind of the instructor or the students about what the student is expected to perform as a result of the instruction.

Do not underestimate the importance of establishing clearly defined and attainable lesson objectives. If you do this part of your planning well, the remainder of your instructing job will be much easier to accomplish. Dr. Robert F. Mager, a leading educator and a strong advocate of student-oriented behavioral objectives, had this to say, "Merely providing each learner a copy of the student objectives may leave the instructor little else to do." (Mager, 1962.)

RESEARCHING THE TOPIC

After you have established the lesson objectives you are ready to do research on the lesson topic. You should look for material that will directly support

one or more of your lesson objectives. You will be looking for material that will be both useful and interesting. If you select material just because it is interesting, you may prepare a lesson that is interesting, but of little value to the student. Conversely, dry facts, without anything to liven them up, will not hold student interest very long. When factual material is enriched with interesting information, the student is likely to grasp and remember it.

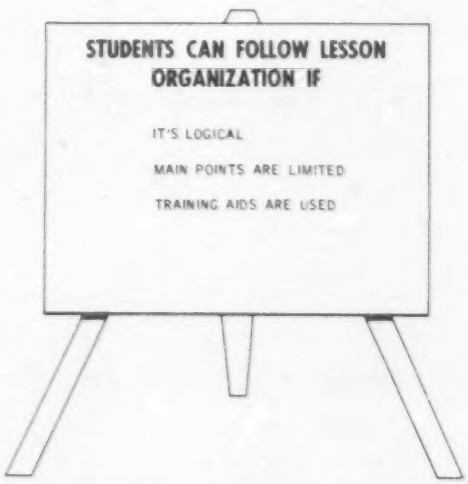
The instructor should weigh carefully every piece of information that he considers using in his presentation. A good test for accepting or rejecting material is the question: Will it help the student achieve the desired lesson objective? This simple test will help you to eliminate material that is useless or unnecessary.

Do you limit your research to the obvious sources, such as your MCJROTC textbooks or the various Marine Corps manuals. They will provide you with the basic material, but remember that they are available to all of the other cadets to read. You will want to introduce some new and different information that will add to the variety of your class and which will allow you to approach the subject from a different point of view. Your Senior Marine Instructor can help you compile a bibliography of reference sources that will aid your research. And don't forget to search the card catalog of your school and public libraries for books that are related to your lesson topic. Periodicals, magazines, and newspapers are also good sources of up-to-date information on a variety of subjects.

As you proceed in finding and evaluating references, you should take notes that you can later organize in a logical sequence. You may take notes on 3 X 5-inch cards or on slips of paper from a small note pad. Copy only *one* item of information or *one* idea on each card. If too much information is put on each card, you will have a difficult time sorting them out and organizing them. It is also helpful to write the subject of the note or the topic it concerns across the top of the card. Although you will probably have more information than you can use in a single class period, it is better to have too much information than not enough. This information will help you to answer questions that arise during class, or you may be able to use the material in a future class. When your research job is complete, you will be ready to organize the material for your presentation.

ORGANIZING THE MATERIAL

After gathering the necessary data, you should organize your material to develop and support the desired lesson objective. Each main point must relate to the other main points, and together they must support the final objective of the lesson. One of the most effective ways to organize a lesson is to divide it into parts. A frequently



Organization is the key to student understanding.

recommended division breaks the lesson into an introduction, a development, and a conclusion.

Introduction. The introduction should serve several purposes: (1) To establish common ground between the instructor and his students, (2) to capture and hold the attention of the group, (3) to indicate what is to be covered and relate this coverage to the entire course, (4) to point out specific benefits the student can expect from the learning, and (5) to establish a receptive attitude toward the subject and lead into the development of the lesson. In brief, the introduction sets the stage for learning.

To gain attention, you might begin by telling a story that relates to the subject and establishes background for developing the lesson. However, you should avoid stories or jokes that do not help the students focus their attention on the lesson. You might also gain the students' attention by making a little-known or startling statement of fact. Your main concern is to gain the attention of the students and focus it on the subject.

The introduction should offer the students specific reasons for needing to know or being able to perform whatever they are about to learn. The appeal may relate to advancement in the JROTC, success in school, athletics, or some other area of interest to students. In every instance a specific application of the learning should be cited. The more immediate the potential benefits, the more likely that you will capture and hold the interest of the class.

Every lesson introduction should contain a brief description of what is to be covered during the period. A clear, concise presentation of the lesson objective and the key ideas gives the students a road map of the route to be followed. An outline of the subject to be covered may be presented by using a chalkboard or some other visual aid.

Above all, keep your introduction short and to the point. If the introduction is long and rambling, you will lose the interest of the class before you get into the subject.

Development. This is the main part of the lesson. Here you will introduce the main points of your lesson in a manner that helps the students to proceed step by step to the desired lesson outcome. You can arrange the main points in one of the following ways: (1) chronologically, (2) from simple to complex, or (3) from the known to the unknown.

1. *Chronologically.* In this pattern of development, the subject matter is arranged from past to present or from present to past. Such time relationships are most useful when history is an important consideration, such as tracing the evolution of weapons or tactics.

2. *From Simple to Complex.* This pattern helps the instructor lead students from simple facts or skills to related but more difficult ideas or skills. In biology, for example, the student studies the simplest forms of life, then some intermediate forms, and finally the more complex organisms. In learning to swim, it is better to practice arm strokes, leg strokes, and breathing separately before trying to put them all together for the first time.

3. *From Known to Unknown.* By using something the student already knows as a starting point, you can lead into new ideas and concepts. Sound waves and electromagnetic waves are invisible, but most people are familiar with the waves or ripples that are formed by throwing a pebble into a pool. Therefore, it is useful to use the students' knowledge of wave action in water to describe the action of sound or radio waves.

Under each main point in a lesson plan, the subordinate points should lead naturally from one to the other. With this arrangement, each point leads logically into and serves as a reminder of the next. Logical transitions from one main point to another keep the students aware of where they have been and where they are going. Organizing a lesson so that the students will grasp the logical relationships of ideas is not an easy task. But this kind of organization is necessary if the students are to learn. Poorly organized information is of little value to the student.

Conclusion. The conclusion of the lesson should include three basic elements: summary, remotivation, and close. The effective summary retraces the important elements of the lesson and relates them to the objective. This review and wrap-up of ideas reinforces the student's learning and helps him retain what he has learned. No new ideas should be introduced in the conclusion, because at this point they are likely to confuse the students. The purpose of the remotivation is to instill in the students a desire to make use of what they have just learned. The close may consist of a quotation or statement that will create a vivid and lasting impression of the main objective of the lesson.

SELECTING INSTRUCTIONAL METHODS

After deciding exactly what to teach in a lesson and organizing the main points, the instructor determines how best to teach it. He must select the method or methods he will use to get his subject across to the students. No one method is suitable for all teaching situations. In most cases you will be using a combination of methods. The various teaching methods that are being used today are too numerous to mention, but the methods you will be most concerned with are the demonstration-performance method, the guided discussion method, and the lecture method.

The effective instructor uses a variety of instruction methods.

Demonstration-Performance Method. The demonstration-performance method of instruction is based on the simple, yet sound, principle that we learn by doing. Students learn physical or mental skills by actually performing these skills under supervision. An individual learns to write by writing, to swim by swimming, and to drive by driving. Students also learn mental skills such as speed reading by this method. The demonstration-performance method is well adapted to teaching military skills and for that reason will perhaps be the method you will use most often as a JROTC cadet instructor. The format for this teaching method is simple and logical. The lesson starts with an explanation and demonstration of the skill to be learned, followed by performance of the skill by the students under supervision of the instructor. Most of the period is devoted to student

performance or practice. It is concluded by instructor evaluation and critique of their performance. You will find the demonstration-performance method ideally suited for teaching such subjects as military drill and marksmanship.

Guided Discussion. The guided discussion method is another method of instruction that emphasizes student participation. Because discussion is such a natural and familiar way for people to exchange ideas, this method is ideally suited for classroom instruction. In a group discussion, the student can fulfill his person-social needs by working with other students. Each student has an opportunity to contribute to and participate in the learning experience. This approach to learning stimulates the student to display initiative and creative thinking. It is a good method for teaching ideas, attitudes, and appreciations.

Although the guided discussion method emphasizes student participation, the instructor must plan the lesson just as thoroughly as for any other method of instruction. He must be well prepared in order to guide the discussion to the desired objective. He does this by asking lead-off questions to get discussion started and follow-up questions to keep the discussion moving to the desired conclusion. Students must also be well prepared in order to get the most out of the guided discussion. Unless the students have some knowledge to exchange with each other, they cannot reach the desired learning objective. For this reason it is better to use the guided discussion to expand or develop a subject with which students are already familiar. If necessary, make reading assignments that will give students an adequate background for discussing the lesson topic. The guided discussion method is well suited for subjects such as leadership and citizenship.

Lecture. In a lecture, the instructor can present many ideas in a relatively short time. Facts and ideas that have been logically organized can be concisely presented in rapid sequence. The lecture is also a convenient method for instructing large groups and presenting information that would be difficult for students to get in other ways.

The lecture is particularly suitable for introducing a subject. To insure that all students have the necessary background to learn a subject, the instructor can present this basic information in a lecture. By using the lecture in this way, you can offer students with varied experience a common understanding of facts and principles.

An important disadvantage of the lecture is that too often it does not provide for student participation. Learning is an active process, and the lecture method does not always get all of the students actively involved. It is difficult to hold the attention of all of the students for an entire class period. You can overcome this disadvantage by using the lecture in combination with other teaching methods. A brief introductory lecture can give direction and purpose to a demonstration. A lecture can also prepare students for a discussion by telling them something about the subject matter to be covered. Use the lecture method when it is appropriate, but combine it with other teaching methods and devices to achieve student interest and participation.

PREPARING THE LESSON PLAN

The written lesson plan is designed to serve several purposes. It is a step-by-step guide for the instructor while he is preparing the lesson, a check list

to insure that he has covered all the main points of the lesson, and a teaching guide during the lesson.

The lesson plan has two parts. The first part is the heading, which includes administrative notes such as time, date, and location of the class; methods of instruction; training aids; any other information or arrangements the instructor must know or prepare in advance. The most important part of the heading is a concise statement of the lesson objectives expressed in terms of what students should be able to do to demonstrate that they have achieved the desired learning.

Part two of the lesson is an outline of the instruction period. It may be as detailed as you care to make it, but it should include the main points of the lesson, arranged in the order that you plan to present them. You may also indicate how much time you intend to devote to each portion of the lesson, how you plan to present each main point, and what activities you will have the students do during the class period.

The following pages show an example of a lesson plan for a class on the manual of the sword. Your own lesson plan may be more or less detailed, depending on the subject or method of instruction. You may omit some of the information included in the example, or you may include much more. The important thing is that you make your own lesson plan to fit your own teaching situation. Even if you can find an existing lesson plan for a given subject, you will more than likely have to change or reorganize it to meet the needs of your students and your method of instruction. Careful preparation of your lesson plan will help guarantee your success as an instructor.

LESSON PLAN

SUBJECT: Manual of the Sword

LOCATION: Drill Field

TIME ALLOCATION: 50 minutes

INSTRUCTORS: 1 Primary and 1 Assistant

TRAINING AIDS: Swords with belts and frogs, one for each student

REFERENCE: Landing Party Manual, Chapter 2, Sec. III, pp 63–76

LESSON OBJECTIVES: Upon completion of class period, student will be able to:

1. Point out and name the parts of the sword (blade, hilt, grips, knuckle bow, pommel, true edge, false edge, fuller, scabbard, and frog).

2. Execute the following positions and movements of the Manual of the sword:

   a. Draw sword.
   b. Carry sword.
   c. Order sword.
   d. Present sword from carry or order sword.
   e. Parade rest, at ease, rest.

f. Eyes right from carry or order sword.

g. Return sword.

Note. 1. Rehearse demonstration with assistant prior to class.

2. Draw swords from armory, one sword for each student. Do not issue swords to students until performance phase.

LESSON OUTLINE

1. INTRODUCTION (Lecture, 3 minutes)

a. Importance of mastering sword manual.

(1) Required of cadet officers and staff noncommissioned officers.

(2) Gives sharp military appearance to parades and ceremonies.

b. Lesson objectives

(1) Identify parts of sword.

(2) Execute positions and movements of manual of sword

c. Method of Instruction (demonstration-performance)

2. EXPLANATION AND DEMONSTRATION (15 minutes)

a. Point out and name parts of the sword.

b. Explain and have assistant demonstrate each position and movement. As assistant repeats each movement "by the numbers," point out proper position of hands and arms at each count.

(1) Draw sword. (Explain when sword should be drawn and returned)

(2) Carry sword. (Explain when to assume carry sword. Explain and demonstrate arm movement while marching)

(3) Order sword.

(4) Present sword from carry or order sword.

(5) Parade rest, at ease, and rest.

(6) Eyes right from carry or order sword.

(7) Return sword.

c. Answer student questions.

3. STUDENT PERFORMANCE (27 minutes)

a. Safety instructions.

(1) Caution against horseplay and careless handling of swords.

(2) Swords will be kept in scabbards when not in use.

(3) All movements will be made on command of instructor.

b. Issue swords and allow time for students to put on and adjust belts. Instructors will supervise and assist.

c. Have students assemble in extended formation.

d. Review and have assistant demonstrate each position, with students repeating movements "by the numbers."

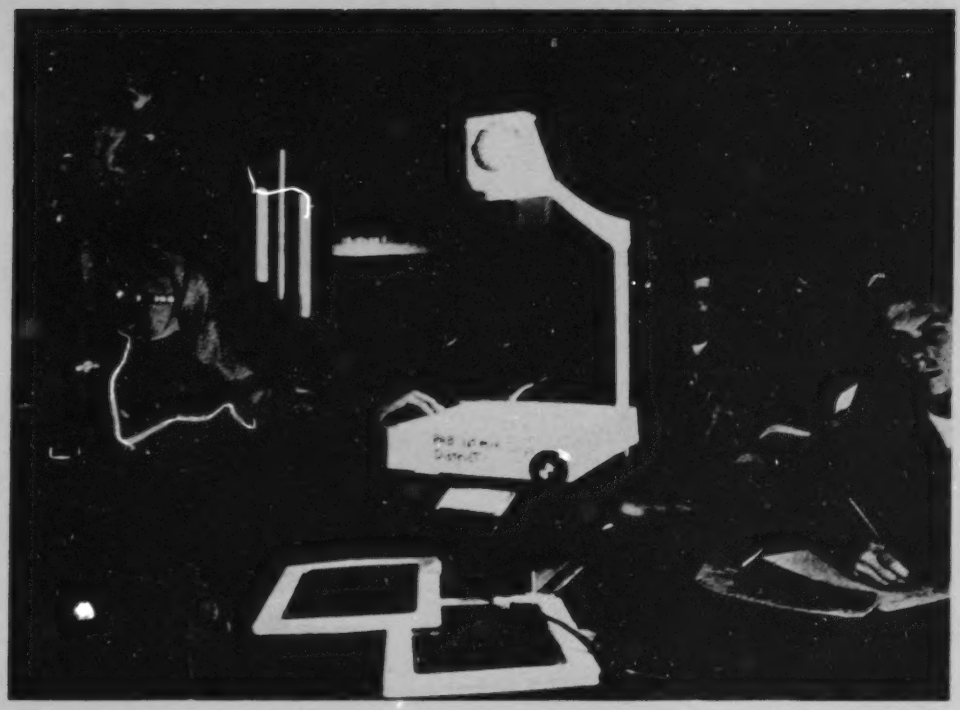
e. When students can perform a movement "by the numbers," have them perform it at normal cadence. Make certain that students can perform each movement properly before going on to next movement.

f. When students have had sufficient practice, have them perform each movement individually and evaluate each student's performance of lesson objectives. Instructor and assistant each will take one-half of class for evaluation. Point out and correct mistakes of each individual.

4. SUMMARY AND CRITIQUE (5 minutes)

a. Review nomenclature of sword.

b. Review proper positions and movements and point out common mistakes. Stress areas that need more instruction or practice.



AIDS TO LEARNING

The instructor can use instructional aids to improve communication between himself and his students. Instructional aids are defined by the National Education Association as "Services which assist an instructor in the teaching-learning process by simply presenting supporting or supplementary material, usually intermittently. They are not self-supporting." They may be either sight or sound devices, or a combination of both. The point to remember is that these aids support, supplement, or reinforce. They do not replace other teaching methods. The instructor must understand some of the theory behind aids, and some guidelines for their use. He should also be familiar with different types of aids.

THEORY

For many years experts have been trying to discover what activity takes place within the human brain during the learning or communicative process. Although there is much difference of opinion over this matter, there is general agreement on three areas of learning theory that help in understanding the use of instructional aids. These areas are concerned with the sorting, organizing, and storing of information.

During the communicative process the mind acts as a filter. As great numbers of verbal or visual bits of information are received, the brain works to sort out the important items from the routine items. Therefore, any means the instructor can use to emphasize the important items will make learning easier for the student. One way to do this is by the use of instructional aids.

The brain also tries to organize the communication bits into reasonable arrangements. Bits of verbal information are more difficult to arrange than visual bits. Therefore, the use of charts, graphs, pictures, and other organized aids can help the student in the logical arrangement of important ideas. They help him to "get his thoughts together."

After the bits of information have been sorted and arranged, the brain is faced with the problem of storing the bits for future use. Storage efficiency and speed of recalling information is improved whenever it is possible to store a single bit (usually a visual one) instead of multiple bits of description. Consider how much easier it is to remember how a tree looks than to memorize a definition of a tree.

REASONS FOR USE

Getting and holding student attention is essential to learning. Visual aids which support the topic cause both the seeing and hearing channels of the mind to work in the same field. Remember the instructor is a salesman of ideas, and many of the world's sales techniques for getting the attention of clients are worth considering. One caution—get student attention on the subject, not just on a distracting gimmick.

An important goal of all instruction is for the student to retain as much of the instruction as possible, and certainly the key points. Many studies have been made to determine the effect of instructional aids on learning retention. The specific results of the studies vary greatly. Some studies indicate retention is increased 10 to 15 percent. Others report increases of retention up to 80 percent. All agree, however, that a significant improvement in student retention occurs when instruction is supported with appropriate aids.

One problem which plagues instructors is to use words which have the same meaning for the student as they do for the instructor. This problem is compounded by floods of new technical terms, the differing vocabularies of people involved and, in some cases, by the need to communicate across the barrier of different languages. Use of visual materials plants in the learner's mind the same mental picture that is visualized by the teacher. The good instructor makes learning easier and more accurate for his student by providing him with visual images.

Instructors are frequently asked to teach more and more in less and less time. Instructional aids can help him do this. Instead of using many words to describe a sound, object, or function, the instructor plays a recording of the sound and shows a picture of the object or function. Consequently, the

student learns faster and more accurately.

GUIDELINES FOR USE

The use of any instructional aid must be planned on its ability to support a specific point in a lesson. A simple four-step procedure can be used to determine if and where aids are necessary.

1. First, clearly establish the lesson objective. Be certain of what is to be communicated. This is the most important step.

2. Next, gather the necessary data by researching for support material.

3. Organize the material into an outline or a lesson plan. The plan should include all key points that are to be presented.

4. Finally, and only after completing the previous steps, determine what ideas should be supported with instructional aids. The aids should be concentrated on the key points. Aids are often appropriate when long segments of technical description are necessary, when a point is complex and difficult to put into words, when the instructor finds himself forming mental visual images, or when students are puzzled by an explanation or description.

Aids should be simple and compatible with the learning outcomes to be achieved. Since aids are normally used in conjuction with a verbal presentation, words on the aid should be kept to a minimum. The instructor should avoid the temptation to use the aids as a crutch for himself. In many cases, visual symbols and slogans can replace extended wordage. The tendency toward ornateness and unnecessary distracting artwork should be avoided.

Aids have no value in the learning process if they cannot be heard or seen. Recordings of sounds and speeches should be tested for correct volume and quality in the actual environment where they are to be used. Visual aids must be visible to the entire class. All lettering and illustrations must be large enough to be seen easily by the students farthest from the aids. Colors, when used, should be in clear contrast, and easily visible. Numerous rules of thumb can be applied to visibility. The surest and most successful rule is actually to test the aids in the environment in which they will be used.

The effectiveness of aids can be improved by proper sequencing—putting things in proper order. Frequently, good organization and natural patterns of logic dictate the sequence. Sequencing can be made relatively simple by using acetate overlays on transparencies, stripping techniques on charts and chalkboards, and by imaginative use of felt and magnetic boards. Sequencing can be emphasized and made clearer by the use of contrasting colors.

The effectiveness of aids and the ease of their preparation can be increased by initially planning them in rough draft form. Revisions and alterations are easier to make at that time than after their completion. The rough draft should be carefully checked for accuracy of information, grammar, spelling, basic balance, clarity, and simplicity.

TYPES OF INSTRUCTIONAL AIDS

Some of the most common aids are chalkboards, projected materials, models, charts, and maps.

CHALKBOARD

The chalkboard is one of the most widely used tools of learning. Its versa-

tility and effectiveness make it a valuable aid to most types of instruction. Two characteristics of the chalkboard are significant: (1) the material presented on it can be erased, allowing the surface to be used again and again; and (2) the chalkboard serves as an excellent medium for joint student-instructor activity in the classroom.

The following practices are fundamental in the use of the chalkboard:

1. Keep the chalkboard clean.
2. Erase all irrelevant material.
3. Keep chalk, erasers, cleaning cloths, rulers, and other aids readily available to avoid interruption of the presentation.
4. Organize and practice chalkboard presentation in advance.
5. Write or draw large enough for everyone in the group to see.
6. Do not overcrowd the chalkboard. Leave a margin around the material and sufficient space between lines of copy.
7. Present material simply and briefly.
8. If necessary, use the ruler, compass, or other devices in making drawings.
9. Use colored chalk for emphasis.
10. Underline statements for emphasis.
11. Use a pointer when discussing chalkboard materials.
12. Stand to the side of the material being presented so that the entire class will have an unobstructed view.

PROJECTED MATERIALS

This group includes motion pictures, filmstrips, slides of several sizes, transparencies for overhead projection, and materials used in the opaque projector. The essential factor governing their use is that the content must support the lesson.

Motion pictures can bring many realistic situations to the classroom. Usually, they emphasize key points with no unnecessary details. The combination of motion and sound appeals to students. The availability of packaged lessons or lesson segments is attractive to instructors. Care should be exercised to insure that the lesson is being supported, not supplanted. Film should be previewed and summarized before use.

Use of other projected materials can be flexible. The sequence of filmstrips is predetermined, but it is possible and sometimes wise to show only selected frames. Slides, transparencies, and opaque items can be placed in any sequence.

Use of projected materials requires careful planning and rehearsal by the instructor for equipment, lighting, and timing.

MODELS

A model is a realistic copy of an actual piece of equipment. Models are not necessarily the same size as the equipment they represent, nor are they necessarily workable.

Models can be used effectively in explaining operating principles of various types of equipment. They are especially adaptable to small group discussions in which students are encouraged to ask questions.

A model is even more effective if it works like the original, and if it can be taken apart and reassembled. With the display of an operating model, the students can observe how each part works in relation to the other parts. When the instructor points to each part of the model as he explains these relationships, the students can better understand the mechanical principles involved.

As instructional aids, models are

usually more practical than originals because they are lightweight and easily moved.

CHARTS

Illustrations, graphs, statistics, diagrams, and other visual material can often be displayed in chart form. The most important factor is the chart's content. Charts may be a series of single stiff cardboards or a series of thin flexible flip charts. The material should be displayed in a clear, easily understood format. The location and handling of charts should be carefully planned and rehearsed.

Maps reduce geographic areas to workable dimensions and visualize topographical and political features, such as distribution of people, land and water areas, animal and vegetable life, climate, economic resources, and political units. Many varieties of maps are available to the instructor. He should select those that contain appropriate information and are on a scale suitable for his class.

SUMMARY

Instructional aids are devices which present supporting or supplementary material to improve the teaching-learning process. The use of aids is based on widely accepted theories about mental processes. These theories suggest that the mind works as a filter in sorting out the important items of the verbal or visual information which is presented. Then it tries to organize these items into reasonable patterns. Finally, the brain finds it more efficient to store single visual bits of information, instead of large numbers of verbal bits.

There are many reasons for using instructional aids. Among the reasons most significant to military instructors are opening and keeping open the communication channel, increasing the retention of learned material, insuring that teacher and student have a common mental picture of meanings, understanding relationships, and teaching more in less time by the elimination of long verbal descriptions.

Aids come in a wide variety of types, such as chalkboards, projected materials, models, charts, and maps. Sensible guidelines should be used in planning and using any aid. These guidelines include planning each aid to support a specific idea, keeping aids as simple and uncluttered as is compatible with the learning outcomes, insuring visibility as to size and location, properly sequencing aids, and planning aids in rough draft form.

An effective instructor should always be aware of new ideas in the field of aids. An active imagination will reveal unlimited possibilities. The aids must support the ideas being developed.

PASS IN REVIEW

Teaching is a very basic element of any leader's job. It is the group leader who is responsible for accomplishing the task, and in order to do so he must train the men whom he leads. An effective leader must not only know the subject matter, but he must also know how to present that material to others in such a way that they can learn the maximum amount with the minimum effort. Utilizing logical and well planned techniques of instruction enables the leader to pass his knowledge and experience to others, thus accomplishing his assigned mission in the best possible way.

a. Clearly state the teaching objective of this chapter.

b. What is the purpose of introducing unfamiliar material into a lesson?

c. Discuss the advantages and disadvantages of beginning a lesson with a joke.

d. How may guided discussion be used to effectively promote student participation?

e. Which method of instruction is best suited to introduce a new topic—why?

f. List some effective "sales techniques" for classroom use.

g. What are some reasons for using color in designing instructional aids.

h. Outline a lesson plan for a fifty minute period; include descriptions of instructional aids to be used and procedures for student participation, if appropriate.

CHAPTER 8

PROBLEM SOLVING

We have read many definitions of problems, but nearly all of them take several paragraphs to say the same things. A problem, in our own simple words, is an unpleasant situation which you cannot remedy by any of the usual means. A flat tire is not a problem if you know how to change a tire and have both jack and spare tire handy, but remove either your knowledge of tire changing, jack, or spare, and you are faced with a problem. Every problem has three elements that make it a problem: (1) a goal (getting a usable tire onto the wheel in place of the flat one); (2) obstacles (no jack, no spare tire, no service station within three miles); and (3) someone who wants to reach the goal. Your ability to remove or pass around the obstacles between you and your goal will determine your success in solving the problem.

To establish a logical procedure, we have set up six steps to be used when solving a problem. They are:

1. Recognize the problem
2. Gather data
3. List possible solutions
4. Test possible solutions
5. Select best solution
6. Implement the solution

"Of course," you might say, "I do that all the time." In solving many of your problems, you probably do go through

a process similar to our steps of problem solving. Solutions of many problems do not require you to write down the whole process in steps. However, soon you may be meeting problems that have several possible solutions, all of which are almost equally feasible, and you will have to choose the best one. In such instances it is nice to know our six step problem-solving method.

To facilitate discussion of problem solving, let's put you in a situation in which you could put the method to use. We will stick to the flat tire theme, since it is something that could happen to anyone.

Suppose you are on your way home from a friend's house, driving through a residential section in your car, when you feel the car begin to pull heavily to the right. Upon pulling over to the curb and examining the car, you find the right front tire almost completely flat. It is 8:30 at night. You have a spare in the trunk, but your car did not come with a jack and you never bothered to get one. There is a service station about a mile away which is open until 9:00. You count the change in your pocket and find 40 cents; examine your wallet and typically find it bare. What do you do?

RECOGNIZE THE PROBLEM

Begin by recognizing the problem. "The problem is a flat tire" might be a usual response, but is a flat tire actually the problem or is it the cause of the problem? Is your problem to get home, to get to the service station before it closes, to get a jack, or to get the car running? When trying to recognize the problem, be careful neither to oversimplify nor overcomplicate the matter at hand. You might oversimplify by stating the problem as "how to get home," but you could drive home on the wheel rim or walk home and leave the car out all night, neither of which you want to do. You might overcomplicate by stating the problem as "How to get to a phone so I can call my dad and have him get a jack and . . ." This would be trying to work all six steps into one mere statement, creating additional problems as the statement grows.

In our case, the problem seems to be best stated, "How to get the usable tire on the right front wheel." This is assuming, of course, that you do not want to leave the car out on the street all night, nor do you want to ruin the tire and wheel by driving it home as is. You have now recognized the problem and have stated it. Immediately the obstacles in the way should begin to come to mind.

GATHER DATA

Solutions to many problems often require more data than is already at hand. In fact, some problems require elaborate research just to discover all factors bearing on the problem. You should always try to collect all the information you expect to need in working out a solution. In your flat tire situation, you know practically everything you need to know. Such details as proximity and closing time of service station, whether or not your father is home, how much money you have, etc., can all be listed as pertinent data.

Your own judgment is your best guide to how much data to collect. There is not much point in listing the fact that your uncle in Toronto has a jack, but you definitely should note the fact that your father has a jack that will work on your car.

Data once gathered should always be evaluated. Not all data you gather

is going to be valid. Separate facts from assumptions, and deal with the data accordingly. For example, it may be a fact that your father has a jack in the trunk of his car, but you may have to assume that he is at home simply because he is usually at home around 8:30 on a week night. It is obvious that you will have to rely on one assumption.

Finally, in the data gathering step, you should establish criteria that the solution must meet to be considered satisfactory. The solution to your problem, for instance, must get you home as early as possible, must bother as few people as possible, must be inexpensive, and must not damage your car. These criteria, you will notice, are the obstacles in the way of solving your problem. Eliminate any one of the criteria and a number of solutions come to mind.

Now you have gathered data on your problem, evaluated the data, and set up a few criteria that your solution should meet. You are ready to continue to the next problem solving step.

LIST POSSIBLE SOLUTIONS

Usually this is a simple matter. Only two or three solutions are really feasible, and it is obvious what they are. Sometimes many solutions may be relevant. On occasion there might even be only one solution, and you will simply have to decide to accept it or reject it. It is best to approach the task of listing solutions with an open mind, thinking of as many solutions to be tested as you are able.

For your flat tire problem, we are only going to list three possible solutions. There are probably more that could be listed, but we are just doing this as an example, and listing all possible solutions for this problem would serve no useful purpose. Our solutions are:

1. Walk (or run) to the nearest service station, ask them to come to your car, remove the flat tire, and put on your spare.

2. Go up to one of the houses along the street, tell them of your trouble, and ask to borrow a jack. If you get one, return to your car, change the tire, and return the jack.

3. Go up to one of the houses along the street, tell them of your trouble, and ask to use their phone. Call your father, have him drive out to your location with his jack, and change the tire.

These are three possible solutions, any or all of which might work. Your job now is to test these solutions against the facts, assumptions, and criteria set up in step two.

TEST POSSIBLE SOLUTIONS

Objective testing of solutions always brings out the fact that there is no one perfect solution to a problem. If there were, chances are that no real problem would have existed in the first place. Testing your solutions will prove this beyond a doubt.

Solution 1 involving the service station is probably the most risky of the three. You may not be able to get to the station before it closes, there may be only one person on duty there (erasing the possibility that the attendant could leave the station to change your tire), and the station attendant might not want to accept your credit (since the job you want him to perform would cost a good deal more than 40 cents). This method would also be time consuming.

Solution 2, borrowing a jack, would be much less complicated. It would probably bother the household where you

stopped, causing one member to get a jack and put it back when you finished, and there would always be the possibility that the man did not keep a jack in his car. The method would, however, be quick and inexpensive.

Solution 3, using the phone in a nearby house, would disturb the household almost equally as much as would solution 2. It would also bother your father (who has been telling you for six months to get a jack). It would take longer than solution 2, but would only be slightly more expensive.

Your solutions are now listed, and the advantages and disadvantages of each are evident. It is now time for you to make the important choice.

SELECT BEST SOLUTION

Here you must choose the best solution—or combination of solutions—to solve your problem. In many instances the choice is clearly evident; in many others it remains for you to choose the lesser of several evils. In your situation, you might select a combination of solution 2 and solution 3. You would probably elect to ask at a nearby house for use of a jack; then, if there is no jack to borrow, opt for solution 3, ask to use the phone, and ask your father to come with his jack. With the solution in mind, you are ready to perform the final step, implement the solution.

IMPLEMENT THE SOLUTION

You have chosen the best thing to do in your problem situation. Now it's time to act. Walk to the most promising house in the vicinity and hope for the best. Of course, the problem remains with you until a sound tire is on the right wheel. If for some reason your solutions fail (perhaps because the man at the house had no jack, or because your father was out buying a loaf of bread), you might have to turn to another solution, or even start the entire process over again, adding additional facts, setting up new criteria, and listing new ways to solve your problem.

We have been dealing here with a very simple problem—one, in fact, that you could probably solve quite easily without going through the formal process of recognizing, gathering, listing, etc. But as we said before, you will undoubtedly come upon a problem some day, either in the Marine Corps JROTC program, or elsewhere, that will require more than immediate insight. When your Senior Marine Instructor asks you to find out why it takes so long to have weapons issued and get cadets out to drill, you may not be able to come up with the answer in a matter of minutes. With the six-step problem solving process you could probably come up with a workable solution that would save time and make your drill periods more productive. The next time you are faced with a problem that does not seem to have a simple and obvious solution, apply this technique. Make it a practice to approach all of your problems with this process. It will pay off in increased efficiency.

PASS IN REVIEW

Simply stated, the leader of a group is the thinker for the group. While it is true that he must be a doer as well, and also true that other group members think, it is the leader who has the responsibility for resolving any problem faced by the group. Therefore it is the leader who will be looked to for direction when the group meets an obstacle, or encounters any unfamiliar situation. The difference in an effective leader and one who stumbles is the time it takes to reach a decision, and the strength and correctness of that decision. You can better decide what to do if you plan every action; utilizing the problem solving technique discussed in this chapter enables you to logically plan your decisions.

a. What might happen if we confuse the order of the problem solving steps?

b. Why is it important to recognize the exact problem?

c. How do you limit the data which is applicable to your problem?

d. Outline the problem solving steps for some situation, similar to those listed below:

(1) Speed up weapons issue.

(2) Improve student/parent relations.

(3) Eliminate conflict in time scheduling between drill practice and football practice.

106

MAJOR GENERAL LEWIS B. "CHESTY" PULLER, USMC

Gen Puller rose from private to general officer in 37 years in the Marine Corps, and only ten of those years were spent in the U. S.; he spent 27 years overseas or at sea. Few men can equal Puller's experience as a combat leader. As a company commander in Haiti, Nicaragua, and China; as battalion and regimental commander in WW II, and as regimental and division commander in Korea "Chesty" Puller proved his worth as a leader of men. A classic example of personal leadership in action, this Marine has become a legend in military history. Puller was a common sense sort of officer, who spared himself less than he did his men; he was at once hard and friendly, forceful and intelligent, and he loved his troops as much as they worshipped him. Gen Puller earned over fifty ribbons and medals, but he was a hero to the men in the ranks without medals, for the men of several nations who had served under him all knew that he did not order, he *led*. "Chesty" Puller cared for his men, and molded them into a fighting team; he listened to his senior officers, and he accomplished the tasks assigned. But most of all the General learned from his NCOs. This man who wore five Navy Crosses and the Distinguished Service Cross learned his lessons well from sergeants who knew; he learned to inspect personally, to teach the troops personally, never to flinch, always to know the basics of a job—in short, to be a man and lead others to do the same. By practicing these characteristics of leadership learned by experience, Puller gained the respect of all, and he respected all those who measured up to his standards. "Chesty" Puller, so called because of his exaggerated military stance, instinctively practiced the finest traits of a leader. Many stories are told of him, mostly true. Ten years after retirement, in 1965, he asked to return to active duty and be assigned to command in Vietnam; in Korea he said that being attacked was good, it simplified the problem of finding the enemy; on Guadalcanal in WW II, when advised that a unit was low on ammunition, he asked if they didn't have bayonets. Yes, Lewis B. Puller was every ounce an officer, not because of his rank or his much decorated uniform, but because of his often demonstrated ability to lead men.

CHAPTER 9

THE ROLE OF THE OFFICER

The importance of the officer in a military unit cannot be overstated. Examples from the past have shown us that a good officer can often mean the difference between victory and defeat. The American Civil War is probably the prime example of the difference an officer can make. The Union Army outnumbered the Confederate Army in almost every major battle. Union Forces were better equipped and better supplied. But through three years of war the Confederates won much more than their share of battles at such famous places as Bull Run, Fredericksburg, Chancellorsville, and The Wilderness. As a consequence, the names of the early leaders of the Army of the Potomac, McDowell, McClellan, Burnside, and Hooker, are not as well remembered as are those of the more successful leaders who followed them, Meade and Grant. Why was the Confederate Army successful despite its lack of material? The answer lies in a handful of men, the Confederate officers of the Army of Northern Virginia, the most famous of whom are Generals Robert E. Lee and Thomas "Stonewall" Jackson. They proved to a watching world that a properly led army can overcome great obstacles and win battles. Although the parallel is historically remote, the same principal can be applied to Junior ROTC units. The unit in the most modern school in the country may flounder because of poor cadet officers. Conversely, a detachment in an older school with poorer facilities can be the best in the country if it has competent cadet officers.

ROLE OF THE CADET OFFICER

Every position filled by a cadet officer has special duties and special problems in it. You will learn these individual responsibilities as you assume the position. There are, however, certain general responsibilities common to all cadet officers with which you should be familiar. If you learn these general duties, we assume that you will proceed to learn the specific ones of your individual assignment.

Much of your role as a cadet officer will deal with relationships—relationships between you and cadet enlisted men, between you and cadet NCO's, between you and your seniors, between you and your platoon, or between you and the cadet company. By examining these relationships, you can get a good idea of the tasks that will confront you as a cadet officer.

OFFICER-ENLISTED RELATIONSHIP.—Surely most of you have heard of difficulties encountered in officer-enlisted relationships. Warnings against overfamiliarity and striving for personal popularity among cadets are common to new cadet officers. It is true that the cadet officer who presents an "old buddy" image to his men may

have trouble when the time comes to get something done, but the cadet officer who goes to the other extreme may also have difficulty.

What we are trying to say is, while avoiding overfamiliarity, do not become aloof and unapproachable. Many a new cadet officer believes, altogether mistakenly, that there is some strange taboo against talking to subordinates except in the line of duty, and that if caught at it, it will be considered below his dignity. We can only hope that such officers remain around long enough to learn better.

It is the responsibility of the cadet officer to attain a rapport between himself and his subordinates. He must strive to know the personality and character of each cadet under him, being sympathetic to their wants, but letting them know what is expected of them. The relationship should be close and cordial, with the cadet respecting the officer and vice versa.

OFFICER-NCO RELATIONSHIP—Much that can be said about the officer-enlisted relationship can be said of the officer-NCO relationship. Beyond the officer-enlisted relationship, however, the cadet officer will have to know what to expect from his cadet NCO. He will quickly discover that the NCO is an essential element in the military organization. He is the one who keeps the wheels of routine and detail running. The effectiveness of the cadet NCO depends to a great extent upon the support he receives from his seniors. Given proper responsibility and authority, the NCO can relieve the officer of many details and can be a never ending source of help.

If you are a cadet officer, remember these rules concerning your relationship with an NCO:

1. Expect a lot from your NCO. Make him feel that you depend upon him as an assistant.

2. Give him the responsibility and authority to go along with his ability.

3. Be loyal to your NCO. Back him up in what he tries to do.

4. Let him know how he is doing. Occasionally discuss with him his strengths and weaknesses. Try to help him build on the strengths and overcome the weaknesses.

5. Listen to his suggestions and recommendations. If they are sound, give him the authority to implement them, or do it yourself.

6. Give him credit when he deserves it.

7. Discuss relevant problems with him. In many cases he will know more about certain matters than you will.

8. Never place the blame on your NCO. In the final analysis, you make the decisions, and the responsibility is yours.

OFFICER-SENIOR RELATIONSHIP—Giving orders and supervising subordinates takes much of a cadet officer's time, but an important part of the cadet officer's work must be conducted with persons of higher rank. The activities of each unit must be coordinated, if not by the cadet in command, then by the Senior Marine Instructor or Marine Military Instructor. Regardless of whether directives come from ranking cadets or from Marine instructors, the cadet officer must be prepared to carry them out without a moment's hesitation.

Just as the cadet NCO must refrain from becoming overfamiliar with cadet officers, so must the cadet officer avoid overfamiliarity with higher ranking cadets and with the Marine Instructors. Proper respect must be shown to persons of higher rank, regardless of whether they are best friends or favorite teachers. In short, the cadet officer must be prepared to receive orders as well as give them and be supervised as well as supervise.

OFFICER-UNIT RELATIONSHIP—Getting others to enjoy working for you is the prime responsibility in the officer-unit relationship. Whether you are in charge of a handful of men or the whole cadet company, you must marshal your discipline, tact, and justice to get the men to want to do what you say. You must know the men well enough to be able to place them in positions in the unit where they will do the best job. This is all true because it is up to you to see that your unit accomplishes its designated mission, and you cannot do it alone.

Working with your unit will probably give you your first taste of managing people and resources, a task that has proved formidable for the best Marine Corps officers. Let us simply say that if you can instill in your men a spirit of cooperation, mold them into a team, and encourage them to work for you and with one another, you will be a capable leader and will have a good relationship with your unit.

EVALUATION OF SUBORDINATES—Periodically you will be required to make an evaluation of your subordinates. At first this will probably be limited to rating the effectiveness of basic cadets, but later you will have to rate more advanced cadets and fellow cadet officers.

The evaluation of a subordinate should be a continuous process. If you wait until the end of a rating period before you begin to evaluate the subordinate, you make your task more difficult and limit the quality of your report. When you are responsible for rating another person, adopt a system of making frequent notes of your impressions during the period of observation. You will then have a factual basis for analyzing the individual's development during the rating period. When the time comes to make the evaluation, all you have to do is summarize your separate impressions. This will allow you to render a valid rating in this important cadet officer responsibility.

MAINTAINING UNIT EFFICIENCY—Finally, you as a cadet officer will be responsible for maintaining unit efficiency. This will entail keeping up cadet morale, watching expenditures of manpower and materials, and doing all you can to accomplish assigned tasks in the shortest possible time. You can do your part to build group efficiency by maintaining those relationships already set forth in this chapter; that is, by fulfilling your responsibilities to your seniors, your subordinates, and to your unit. If you can perform these duties, you will be a successful cadet officer doing your part to create an efficient Junior ROTC unit.

PASS IN REVIEW

There is much more to being an officer than just wearing brass on your collar and returning salutes. True, the officer has prestige, and pride; he may gain honor and perhaps a bit of glory. But most of all the officer gets responsibility. To obtain the rank, a man must first prove himself worthy—that is, he must demonstrate to his seniors that he is capable of assuming the added responsibility which assignment to an officer's rank entails. The officer must combine his knowledge and experience with common sense and maturity; to this mix he needs to add judgement and loyalty, then season with tact all that he does. Most of all the officer leader must have concern—for his men, for the mission, and for the organization he serves. He needs the ability to be both fair and firm, to not only see and hear his men, but to understand them. He is in every sense of the word a servant; he cares for his men in order that they might accomplish the assigned mission, and he serves with his men that mission to which he is assigned. A good officer is a manager, not just of men, but of men's relations with one another, for he knows that the working relationship which he establishes with others will determine how well his job is done.

a. What are some characteristics of a good officer which you have observed in others?

b. What can an officer do to win the respect of both his juniors and his seniors?

c. Does familiarity breed contempt?

d. Are the standards for an officer leader different from those for a leader who is an NCO?

e. Define the term loyalty, as it applies to both juniors and seniors.

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LEADERSHIP IN ACTION

PART TWO

MILITARY ORIENTATION AND ORGANIZATION

CHAPTER 10

MARINE CORPS MISSION AND ORGANIZATION

The National Security Act of 1947 established the present Department of Defense and its three military departments: Army, Navy, and Air Force; the act furtner provided for the specific responsibilities of the various services. The Marine Corps, as an integral part of the Department of the Navy, is defined by this public law to be an organization of no less than three combat divisions and three aircraft wings, with organic supporting forces. The act states that the Marine Corps is to be organized, trained, and equipped to provide the fleet with forces of combined arms and supporting air elements. Considering the fact that 71% of the earth's surface is covered with water, a combat-ready force that can be deployed with the naval fleet is an essential requirement for the extension of our nation's foreign policy and diplomacy. It is the ability to go anywhere at any time which has caused the Marine Corps to become known as the country's "Force in Readiness." The Organization of the Marine Corps stresses that posture which is necessary to accomplish the primary mission assigned by law.

The primary mission of the Corps is to serve as the amphibious force which allows a fleet commander to extend his power ashore. Fleet Marine Forces are tasked to seize or defend advance naval bases and to conduct such land operations as are essential to the prosecution of a naval campaign. No amount of firepower, whether from the sea or from the air, can occupy a piece of ground; the seizure or defense of a base requires that a man stand on that terrain and call it his own, at whatever cost. It is that mission, assigned by law, which makes the individual Marine the single essential element in the Corps. A Marine must first stand on the needed piece of land. This basic fact of combat, that a person must physically occupy territory to claim it, is the keystone of Marine Corps organization. Aviation units and all supporting forces of the Corps exist solely to assist the combat ground forces.

Marine divisions are composed primarily of infantry units; all other types

Marines with supporting arms and air elements can be launched from Navy Shipping to extend the power of the fleet commander ashore.

As he advances on his objective, the Marine rifleman, who is the single essential element of the Marine Corps team, is supported by all combat arms.

of units, including air units, are very necessary in modern warfare. But they all serve the same purpose—support of the ground forces. Marine aviation is of sufficient importance to be discussed in a separate chapter. The necessary point for this discussion is that all aircraft, whether attack or transport, whether fixed wing or helicopter, are in the Marine wing to serve the ground combat units, just as the non-infantry units found in the divisions and in Force Troops are there to provide support to the ground combat element, the infantry. Communicators and intelligence analysts, clerks and truck drivers, reconnaissance people and engineers, medical personnel and artillerymen, supply people and tankers all serve the same purpose: support of that man who will eventually occupy a piece of ground.

INFANTRY—THE QUEEN OF BATTLE

The previous paragraphs emphasize the importance of the Marine infantryman, the individual rifleman who is still the basis of the entire Marine Corps, regardless of the sophistication of modern weapons. The needs of this single individual, the rifleman, determine the organization and concept of operations for all elements of the Marine Corps. It is then important that we understand the rifleman in his native surroundings, that we fully comprehend the command relationship between the individual infantryman and the vast forces which are provided to support him and his fellow combat troops. We can best visualize this essential Marine within his own team, the Marine Fire team, and then multiply that fire team into a Marine division.

The smallest maneuverable unit of the Marine Corps is the fire team, made up of four Marines. The fire team is a unit built around the automatic rifleman. Firepower, centered in the automatic rifle, is the purpose in life of the fire team. The team is led by a fire team leader, a corporal, who directs the automatic rifleman, a lance corporal, and two riflemen, both privates. An essential element of the flexibility of the entire Marine Corps is demonstrated by this fire team, for every man in this small unit is capable of performing the duties of every other member of the team. This practice of knowing the duties of all team members is carried out to the highest level of the Marine Corps air/ground team, so that men at the required moment can assume another's leadership position as required to accomplish the mission.

The Marine rifle squad is made up of thirteen men: a sergeant squad leader and three fire teams. These are the men who will "seize or defend an advance naval base." The squad leader carries out the orders issued to him by his platoon commander, a lieutenant, and is responsible for the discipline, appearance, training, control, conduct, and welfare of his squad at all times. In the same manner every Marine leader,

The fireteam, with a leader, an automatic rifleman, and two riflemen, is the smallest maneuver unit in the Marine Corps.

whatever his rank, is responsible for his unit and all it does or fails to do. This dedicated and personal method of leadership, based on close contact, is exercised at every level of command in the Corps.

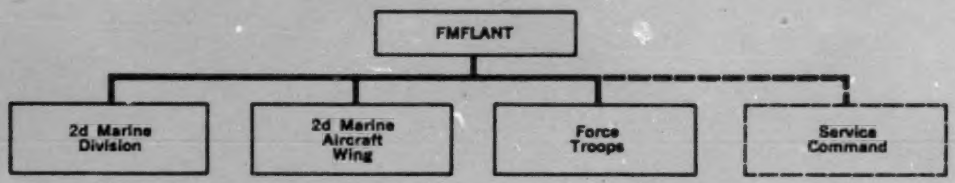
The same triangular structure seen in the squad is found in the rifle platoon, composed of three squads. The officer platoon commander and his platoon sergeant control and direct their squads in much the same manner as that utilized by the squad leader in handling his fire teams. Similarly the rifle company, the basic maneuver element of an infantry battalion, is composed of platoons. The company commander, a captain, exercises control through his executive officer, platoon commanders, and first sergeant to manage, train, and administer the company as required by the mission. The company organization includes a weapons platoon which has rockets, mortars, and machine guns. Thus the company commander has a built-in supporting arms capability; with an appropriate mix of rifle platoons and weapons platoon firepower, the company commander can effectively perform a variety of missions, from squad reconnaissance to platoon assault to company defense. It is at this level, fireteam through company, that the esprit de corps which binds the Marine Corps into an effective fighting force is formed. It is at the level of the individual rifleman and his unit that basic leadership is established and tested. Here the character and responsibility expected of every Marine leader is practiced daily, for at such close quarters personal leadership is all important.

The relatively small units of the preceeding paragraphs constitute the backbone of the Marine Corps, the "force in readiness" which has so ably demonstrated throughout its history that it has the flexibility and skill to respond rapidly to any assigned mission. No matter what the task might be, from a wing/division air/ground team in an amphibious operation to a company rebuilding a native village, the teamwork and skilled leadership of trained Marines is ready at any time.

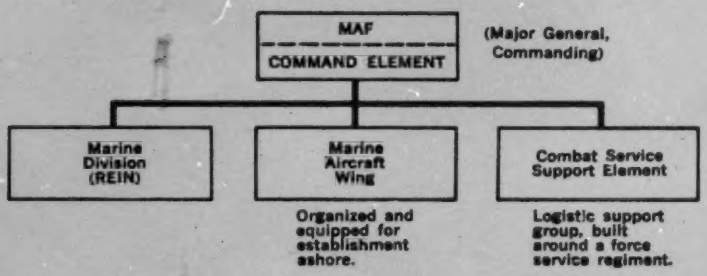
THE FLEET MARINE FORCE (FMF)

Wars and modern technology always bring about changes. World War II, Korea, and Vietnam all introduced new concepts and new methods which were incorporated into the Marine Corps' operational planning. What was learned then is applied now, and any requirement for future changes will be met to insure that the Corps stays ready to serve the nation. One such change may be seen in today's overall concept of Marine Corps organization. The Marine Corps exists to serve the fleet, and so there are presently two fleet Marine forces, one in the Pacific and one in the Atlantic. Within these two forces (FMF's) are found three Marine Amphibious Forces (MAF's). The reserve air wing and infantry division of the Marine Corps Reserve could, if required, form still a fourth MAF. A MAF is an air/ground team

FLEET MARINE FORCE, ATLANTIC



MARINE AMPHIBIOUS FORCE



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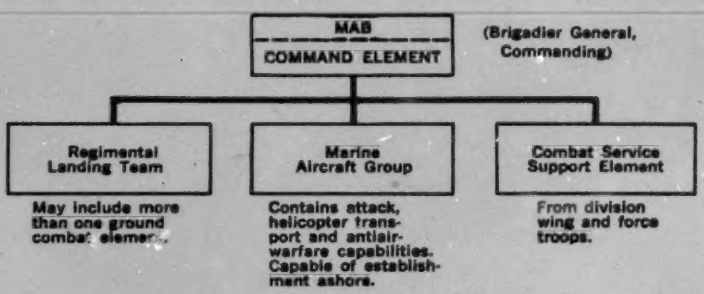
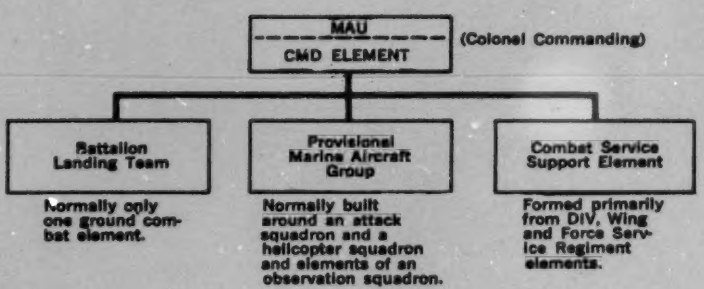

MAB
COMMAND ELEMENT
(Brigadier General, Commanding)
Regimental Landing Team
Marine Aircraft Group
Combat Service Support Element
May include more than one ground combat elemen
Contains attack, helicopter transport and antiair-warfare capabilities. Capable of establishment ashore.
From division wing and force troops.

MARINE AMPHIBIOUS UNIT


MAU
CMD ELEMENT
(Colonel Commanding)
Battalion Landing Team
Provisional Marine Aircraft Group
Combat Service Support Element
Normally only one ground combat element.
Normally built around an attack squadron and a helicopter squadron and elements of an observation squadron.
Formed primarily from DIV, Wing and Force Service Regiment elements.

composed of, as a minimum, one wing and one division, with necessary supporting forces tailored for a specific mission.

The MAF, the largest modern maneuver element of the operational forces of the Marine Corps, is totally self-sufficient and equipped and prepared to assume any task appropriate to its size on land, sea, or air. Equivalent to the MAF in adaptability, but smaller in size, is the Marine Amphibious Brigade (MAB). A MAB is composed of one infantry regiment, one air group, and supporting artillery, communications, and logistics elements as required. Still smaller than the MAB is the Marine Amphibious Unit, made up of an infantry battalion and an aircraft squadron of the proper aircraft for the job at hand, plus all the supporting combat service units needed. This concept of tailoring an organization to fit the mission, called task organization, insures that the job will be done with maximum efficiency and minimum waste.

Fleet Marine Force elements are typically employed as Marine air/ground task forces for the purpose of performing amphibious assault missions. A Marine air/ground task force usually moves into the objective area in ships of the amphibious task force. When a Marine air/ground task force is assigned to an amphibious task force for the amphibious assault, it is usually termed the Landing Force. Upon arrival in the objective area the assault units are landed by helicopter, landing craft, landing ships and/or amphibian vehicles, according to the landing plan developed by the Landing Force Commander, a Marine officer, under the over-all control of the Amphibious Task Force Commander, a naval officer. By using his tactical Air Commander, The Amphibious Task Force Commander Controls the helicopters in their portion of the assault.

When the situation permits, the commander of the Marine air/ground task force establishes his command post ashore, and control of the operation ashore is then passed to him. As soon as adequate communications and air control facilities are established ashore, direct control of all aircraft supporting the land operations is passed ashore.

Marines, such as these men shown hitting the beach from a landing craft, are but one element of an amphibious task force.

Marine aircraft are phased ashore from carriers and rear area airfields after air facilities in the objective area are seized or constructed; eventually, the entire air component with its services and facilities operates from the shore, permitting the carriers to withdraw.

At the termination of the amphibious operation, the amphibious task force is dissolved in accordance with prearranged plans. After accomplishment of the landing force mission, the Marine air/ground task force withdraws from the area in the shipping prescribed, in order to preserve its tactical integrity for future operations.

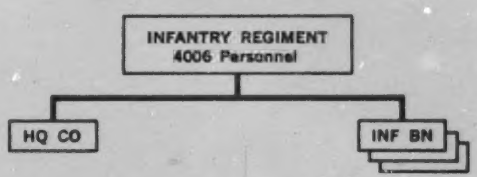
MARINE DIVISION

The Marine Division, commanded by a Major General, forms the nucleus of the Marine Amphibious Force in amphibious operations and in land operations ashore under conditions of limited or general war which may range from the "brush fire" all the way up to those which threaten the use of nuclear arms. As you can see from the diagram, the division contains most of the elements required for successful operations ashore. The units that form the focal point of the division are its three infantry regiments. All other units within the division are established primarily to support the infantry regiments.

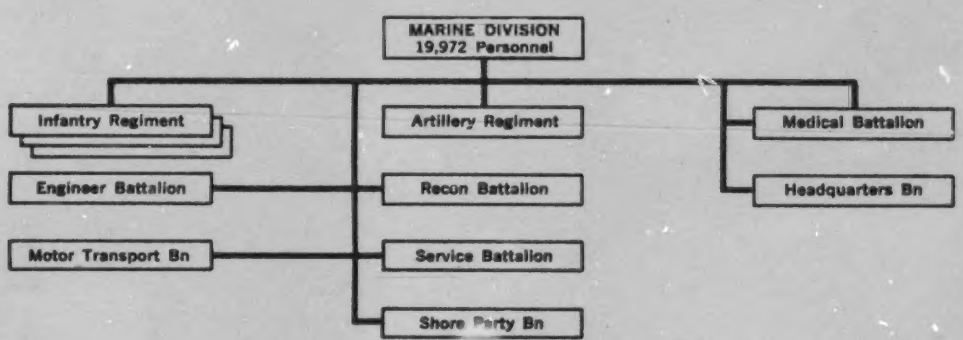
INFANTRY REGIMENT

The infantry regiments are the basic tactical units with which the division accomplishes its mission. When combined with other combat support and combat service support units, the infantry regiment will form a regimental landing team, which is commanded by a colonel. The basic ground mobility of the regiment is by foot, supplemented by small, lightweight vehicles for the transportation of electronics equipment, weapons, and limited amounts of ammunition and supplies. All elements can either be transported by helicopter or other means of transportation such as amphibian vehicles, motor transport, fixed-wing aircraft and ships.

INFANTRY REGIMENT



MARINE DIVISION



INFANTRY BATTALION

As the basic tactical unit of the regiment, the battalion, commanded by a lieutenant colonel, provides the nucleus of ground combat power. With attachments, it is capable of independent sustained operations for a limited number of days, depending on combat conditions. Within the battalions are the infantry companies, which were discussed earlier.

INFANTRY BATTALION

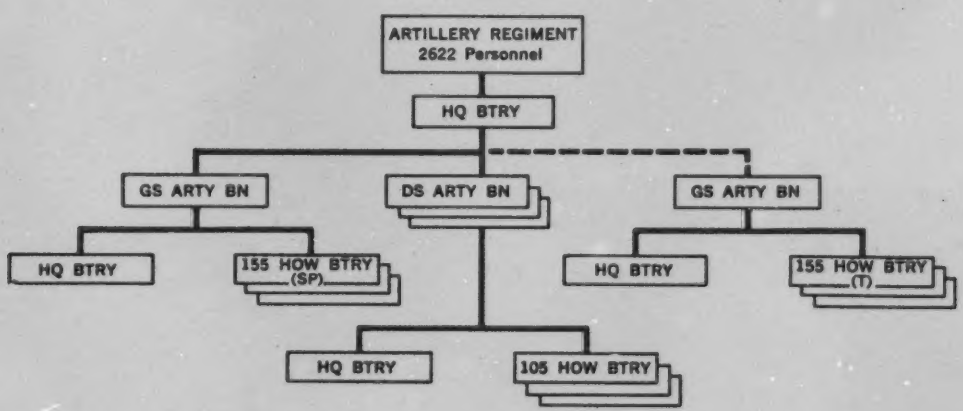
THE ARTILLERY REGIMENT

The artillery regiment is the primary source of fire support for the Marine division. The regiment provides direct and general supporting fires to the deployed infantry units. Its operations and actions are closely integrated with those of the infantry so that it can respond to rapidly changing tactical situations. Within the regiment are the general support artillery battalion and the direct support battalions.

The general support battalion, with its three 155MM howitzer batteries, can be massed for concentrated fire at desired points in the division Area of Operation. The separate batteries of the general support battalion may be deployed to provide reinforcing fires to the direct support battalions.

The accuracy and range of Marine artillery is well known to every ground commander who has needed close fire support quickly.

ARTILLERY REGIMENT



The direct support battalions are the workhorses of the regiment. Each has eighteen 105mm howitzers. They provide the bulk of artillery fire support for the division. As an example, in Vietnam, one of the primary sources of fire support were howitzer units that had been heli-lifted to mountain tops. Often inaccessible from the ground, these fire support bases could provide extensive coverage over a considerable area, firing on known enemy routes, and providing "on call" fires in support of friendly units operating in the area.

RECONNAISSANCE BATTALION

Providing the eyes and ears of the division is the responsibility of the recon battalion. Units varying in size gather information, primarily on enemy activity, and provide it to the division for assimilation into battle plans. Aerial surveillance has become increasingly important due to the advancements in electronic equipment, but the man on the ground is still heavily relied upon for verification and "eyeball" accuracy.

Reconnaissance Marine in photo intelligence gathering exercise.

ENGINEER BATTALION

In any operation, the division usually has to establish or improve conditions for its units to move from one point to another and be resupplied. The construction or repair of roads and bridges to meet the basic requirements of the division is the basic mission of the engineer battalion. The battalion also is responsible for laying mine fields, providing water, erecting temporary fortifications, breaching obstacles, and, in general providing the engineering skill and equipment to accomplish the mission of the division.

SHORE PARTY BATTALION

An amphibious operation is a great deal more than battalions storming across a beach. The means for sustaining those battalions must come across the beach as well, and this is the mission of the shore party: to facilitate the landing and movement of troops, equipment, and supplies across the beaches; control the beaching, retraction, and salvage of landing craft; and evacuate casualties and prisoners of war from the beaches.

SERVICE BATTALION

Once ashore, supply and maintenance support is vital for the continued operation of the division. The primary source of this support is the service battalion. The mission of this battalion is to provide all classes of supplies, field maintenance of equipment, and to provide data processing services for the division. The service battalion, when

properly augmented, provides combat supply and maintenance support of a division for a 15–20 day period.

MOTOR TRANSPORT BATTALION

As modern history tells us, the days of static, trench warfare are over. To maintain an often fluid situation in the division's operation area, transport of men and supplies must be accomplished rapidly. The helicopter has assumed much of this burden, but the motor transport battalion still furnishes the pool of heavy transportation support for the division. It provides limited tactical mobility and logistical support. The motor Transport Battalion can transport the assault elements of two infantry battalions.

MEDICAL BATTALION

The Navy's participation in Marine Corps amphibious operations speaks for itself in the initial stages of an operation. It takes on a much more personal aspect, though, in the mission of the medical battalion. This is primarily a Navy unit with the responsibility for collection, emergency treatment, temporary hospitalization, and evacuation of casualties. Their job is saving lives.

MARINE CORPS AVIATION

Marine Corps aviation is an important part of the Fleet Marine Force. In fact, the role of aviation is important enough for us to consider Marine Corps operations as those of a Marine Air/Ground Team. Because of this importance we have devoted a separate chapter to aviation. Let us continue then with the discussion of the other major elements of the Fleet Marine Force.

FORCE TROOPS

A quick look at the division organizational chart shows that it contains most of the elements necessary to carry out independent operations. However, experience has shown that in practically every operation additional support is needed. The situation may dictate a need for more artillery, more transportation, or perhaps tanks. In order to fill these gaps, a pool of additional support is available to the Force commander which he can call on to meet changing situations and new demands. This pool is referred to as Force Troops.

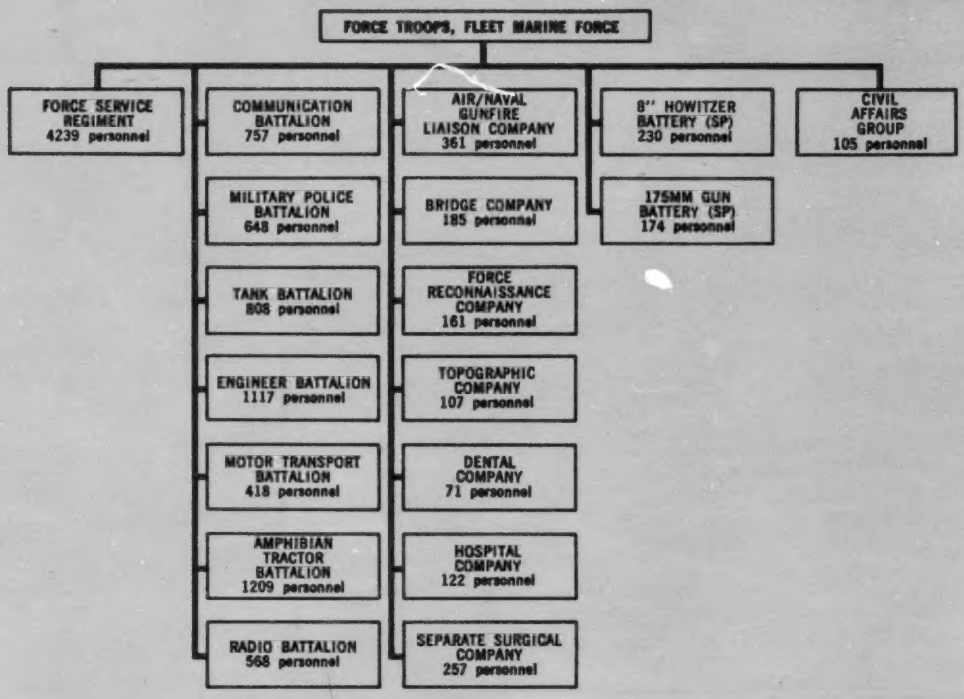
Basically, force troop units are those which are not part of the division or wing. When the situation dictates, the commanding general of the FMF can attach any of these units to the appropriate elements of the landing force. By this method, the divisions and wings are relieved of the administrative and logistical burden of these units when special skills and augmentation are not required. At the same time, they are readily available when the nature of a particular operation requires their use.

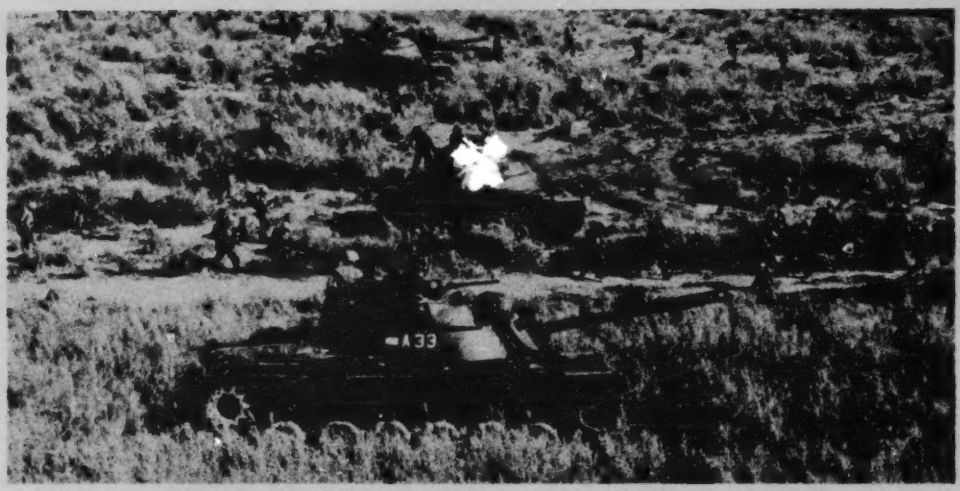
Force troop units are composed of combat support, combat service support, and service troops organized as separate regiments, battalions, companies, batteries, or groups. Each of these units has its own mission, organization, and equipment.

FIRE SUPPORT

Should the situation arise where the force commander needs additional fire support, he can call on a variety of units with special capabilities. The accompanying diagram will give you an idea of what is available to the commander.

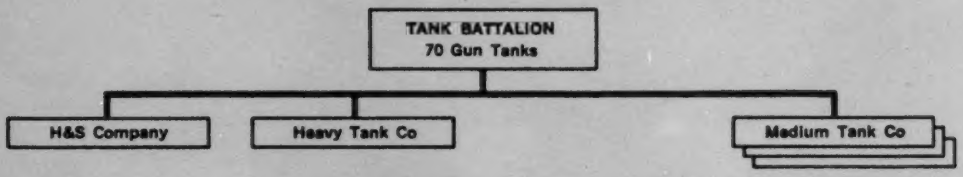
Vitally concerned with fire support



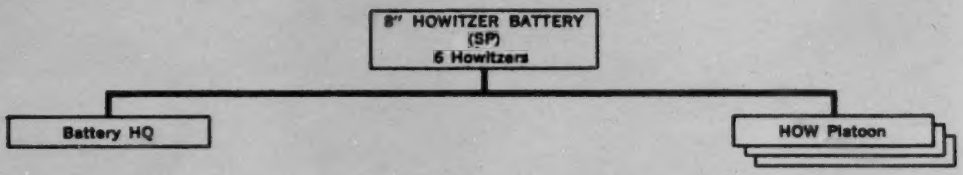


Infantrymen and the tank have been friends since WW I; mutually supporting, men and machines work together to search and destroy hostile targets.

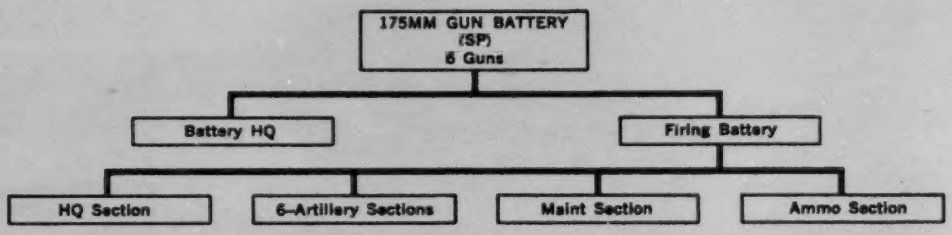
TANK BATTALION



8" HOWITZER BATTERY (SP)



175MM GUN BATTERY (SP)

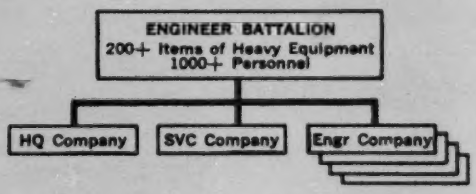


but possessing no organic weapons itself is the Air/Naval Gunfire Liaison Company which coordinates support from naval aircraft and gun ships.

FORCE RECONNAISSANCE COMPANY

The force reconnaissance company is employed to collect information for the force and, when necessary, to provide guidance for assault helicopters. The company is not assigned missions as a whole nor is it assigned tactical missions, objectives, or tactical areas of responsibility. The company furnishes small teams and supporting personnel for the performance of specific reconnaissance, surveillance, or guidance tasks.

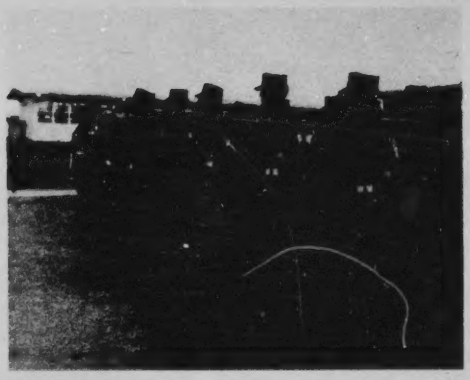
ENGINEER BATTALION, FMF



ENGINEERING SUPPORT

Operational requirements often call for a more extensive engineering capability than that provided for by the division engineer battalion. This is when the specialized skills of some of the force troops units are called in. Those involved with engineering problems are shown in the Engineer Battalion diagram.

Navy corpsmen, such as this one racing across an exposed rice paddy to aid a wounded man, are an integral part of Marine units; they are on the scene when needed for minor or major medical attention.



Security of government property and control of traffic are but two vital functions performed by the Marine Corps military police.

MEDICAL SUPPORT

To provide more sophisticated medical care and treatment for conditions other than those brought about by combat, additional medical units are available to the force commander. Again, these are staffed primarily by Navy personnel and include the most advanced equipment available for use in the field.

TRANSPORTATION SUPPORT

An operation may require elements of the landing force to go further than from ship to shore. If units are required to go inland or cross reefs, amphibian tractors, or "amtracs" as they are called, can be employed. In case additional land transportation is required, this too, can be found in Force Troops.

COMMUNICATIONS BATTALION

Instant communications are possible with today's technology, and in combat situations they are vital. To maintain and augment the landing force communications network, additional support is found within the Communications Battalion.

MILITARY POLICE BATTALION

Even during an amphibious operation, order has to be maintained. This includes regulation of traffic and various types of security measures. The responsibility for this falls on the Military Police Battalion. Since the MPs also perform vital functions at posts and stations, they are discussed in greater detail in another chapter.

CIVIL AFFAIRS GROUP

During times of war not everyone the military man comes in contact with is a combatant. There are civilians whose welfare must be considered as much as possible. Often the proper treatment of civilians can mean the difference between success and failure. This became evident during the Vietnam War. There the civilian population had to be considered in practically every operation. As a result, various assistance programs were instituted by the Marines

Men such as this Marine captain, who is helping the Vietnamese build a dispensary, have assisted natives of many lands to build and repair, and lifelong friendships have grown because of such civic action projects.

which proved to be extremely successful. Schools were built, wells were dug, supplies of all sorts were made available. Small units of Marines actually moved into villages and hamlets where they became a part of the community, providing not only security but medical care and technical assistance as well. Basically, what the Marines did was to get involved with the people of the country. This involvement had numerous names such as civic action, combined action, and pacification. For purposes of organization and planning, the unit responsible for establishing this involvement is now called the Civil Affairs Group. It contains the necessary elements for creating a positive, helpful relationship with civilians in an operations area.

FORCE SERVICE REGIMENT

The amphibious force when it lands has the capability of logistically supporting itself for only a short time. This may be sufficient to complete the mission, but if a longer time is required, additional support must be brought in. This unit that provides this sustained logistic support is the force service regiment.

The units we have discussed in this chapter constitute a "force in readiness." What this means is that the Corps is ready at all times for missions that may require anything from one platoon to all active divisions, wings, force troops and the reserve. This readiness calls for flexibility, and that flexibility is built into the system.

PASS IN REVIEW

By virtue of the mission assigned to it by public law, the Marine Corps must be a force in readiness, and it is this every ready requirement which determines the basic organization of the Corps. The aviation and ground units of the Marine Corps are so arranged and combined to most effectively provide a fleet commander with the needed forces to extend his power beyond the shoreline. Understanding the concept of organization of the Marine Corps is essential to understanding how the mission is accomplished.

a. Explain the relationship between mission and organization.

b. List some historical examples of the importance of the infantry.

c. Explain why the Marine Corps is organized as it is.

d. Discuss the interdependence of air, artillery, and infantry units.

e. What are some types of support units found in Force Troops?

f. Which single aspect of Marine Corps organization contributes most to the flexibility of the Marine Corps?

CHAPTER 11

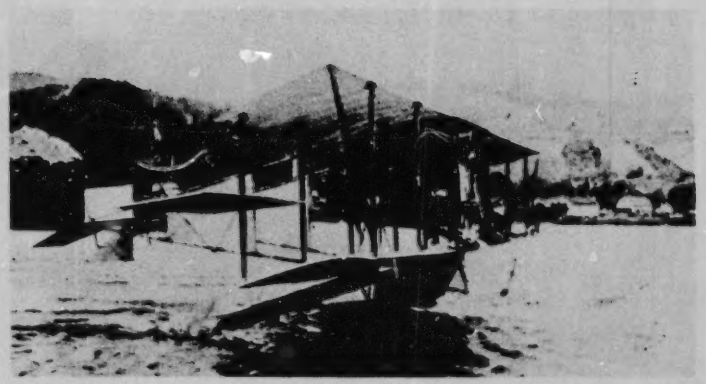
SUPPORT FROM THE SKY

In today's Marine Corps air/ground team one fourth of the Marines are in the aviation branches; one third of all Marine officers wear the golden wings of a Naval Aviator. Since Lt. Alfred Cunningham was designated the first Marine Corps pilot in 1912 the mission of the Marine air arm has been to support the infantryman. Lt. Cunningham was the first to say that his job was to assist the ground forces from the air, and all Marine aviators since that time have developed the unique skills necessary for close air support in integrated air/ground operations. Being intimately familiar with infantry tactics, weapons, artillery, etc., the Marine aviator understands what the guy on the ground under his wings needs, and he delivers it with the same skill and spirit seen in other areas of the Marine Corps.

Marines first fought in the skies of France in 1918, and there they learned that tight control of the air over a battlefield is all important. The concept of a closely knit air/ground team grew after the First World War, and this concept became a reality in 1927, when the first dive bombing mission was carried out in a Nicaraguan jungle by Marine pilots supporting Marines on the ground. The descendants of these aviators now fly from carriers and from jungle clearings, in supersonic jets and in hovering helicopters, but their job is the same—to support the trooper on the ground. The men and machines of Marine aircraft wings are truly an essential element in the Marine team.

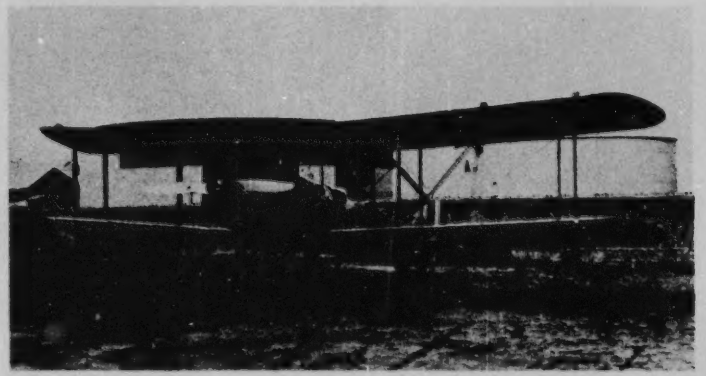
Following are photographs of some of the aircraft flown in the first fifty years of Marine aviation, beginning with the bundle of sticks, wire, and canvas flown by Lt. Cunningham.

The NOISY NAN was a rental aircraft. In 1911, 1stLt Alfred Cunningham got permission to fly his aircraft off a drill field at the Philadelphia Navy Yard. Noisy Nan made aviation history, by carrying the Corps' first pilot on his maiden flight in a prop-driven plane.

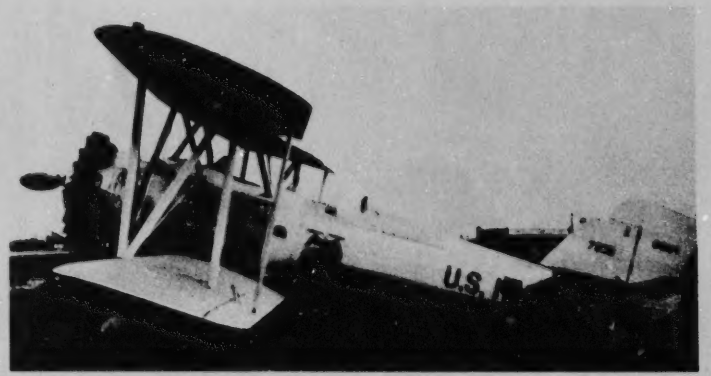


The AX–1 BAT BOAT was a single-engine, two-crew, biplane, amphibian "owl" by Curtiss. This was Marine Aviation's first plane.

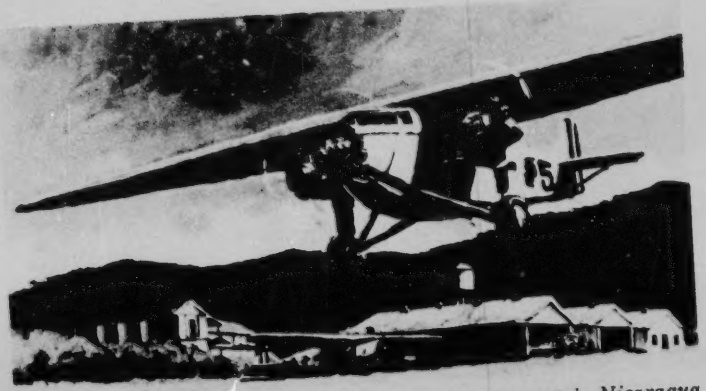
The N–9 TRAINER SEAPLANE was used as a trainer for Marine and Naval Aviators in 1917.



The DH–4 was assigned to the First Aviation Force in WW I to provide air delivery of food and supplies to French troops isolated by the Germans. It was later used in Haiti during the Banana Wars.



02U–1 OBSERVATION PLANE. The 02U was a single-engine, 2-crew, 1-float, convertible biplane by Vought. In 1927 it was used for observation in Nicaragua. It was also used to airlift some wounded Marines from the Nicaraguan jungle.



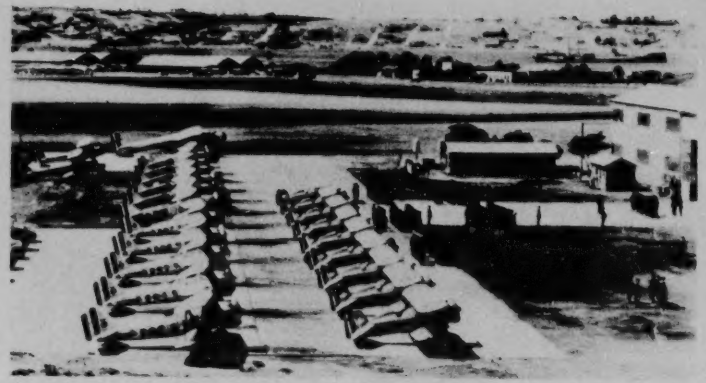
The FOKKER TRIMOTOR was used by VO-6M in 1929 in Nicaragua for observation and for the transportation of troops and supplies.

The 0SUG OBSERVATION SCOUT was a one engine, two man crew, convertible biplane. Used primarily for training and observation.

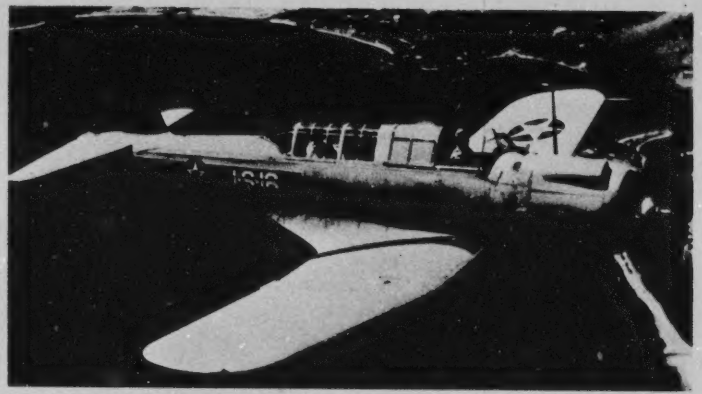
The VE-7 TRAINER was a single engine, two man crew biplane. It was employed as another Marine trainer.

The RC-1 "KINGBIRD" was a monoplane built by Curtiss-Wright. It was employed as a transport-ambulance.

The OP–1 AUTOGIRO joined Marine Aviation in 1931. It foreshadowed today's principle of vertical envelopment.



In April of 1933 these SU–2's and F4B's were aligned for inspection at the airport in San Diego.



The SB2U SCOUT BOMBER "VINDICATOR" was the slow moving bomber used by the Corps in December of 1941. It was partly fabric-covered and no match at all against the Japanese Zeros.

The F4F "WILDCAT" FIGHTER was a single engine, one man crew land/carrier fighter. It was used in 1941 and in the early phases of WW II.

MISSION AND FUNCTIONS OF MARINE AVIATION

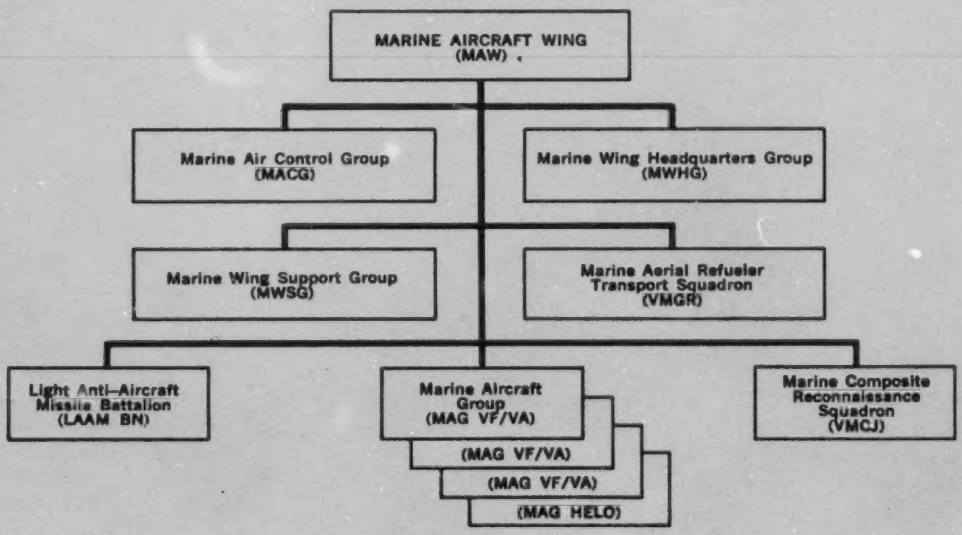
The primary mission of Marine Corps aviation is to participate as the supporting air component of the Fleet Marine Forces (FMF) in the seizure and defense of advanced naval bases. A collateral mission is to participate as an integral component of naval aviation in the execution of such other naval functions as the fleet commanders so direct.

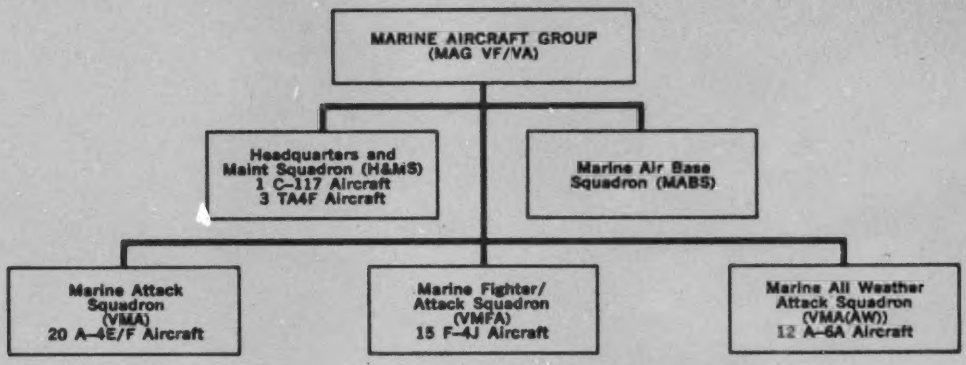
The multitude of tasks required to support the mission may be categorized under five separate functions: (1) Offensive Air Support which actually delivers firepower against the enemy, (2) Anti-Air Warfare conducted against the enemy for the purposes of gaining and maintaining air superiority; (3) Assault Support which delivers personnel, supplies, and equipment into and from areas of combat operations; (4) Aerial Reconnaissance, which is the acquisition of intelligence by employing aircraft in visual, electronic and sensory collection methods; and (5) Control of Aircraft and Missiles. In this last area the control is provided by the use of radar, radios, tactical data systems, etc.

ORGANIZATION OF THE MARINE AIRCRAFT WING

The Marine Aircraft Wing (MAW) is the highest level tactical command in Fleet Marine Force (FMF) Aviation. The MAW is a flexible task organization comprised of groups, squadrons, and missile units. Each component is assigned to carry out a particular mission at a particular point in time. The normal lines of organization as found in the Marine Division do not exist in the MAW. Within the MAW the squadron is the only Table of Organization (TO) and administrative unit.

Presently there are three active MAW's. Each one works in conjunction with its combat partners, the Marine Division, Force Troops, and other Naval Aviation units. The MAW diagram represents the typical Wing and its subordinate units.


MARINE AIRCRAFT WING (MAW)
Marine Air Control Group (MACG)
Marine Wing Headquarters Group (MWHG)
Marine Wing Support Group (MWSG)
Marine Aerial Refueler Transport Squadron (VMGR)
Light Anti-Aircraft Missile Battalion (LAAM BN)
Marine Aircraft Group (MAG VF/VA)
(MAG VF/VA)
(MAG VF/VA)
(MAG HELO)
Marine Composite Reconnaissance Squadron (VMCJ)



THE MAG

The Marine Aircraft Group (MAG) is a Tactical command element. It is the smallest aviation element designed for independent operations with no outside assistance except access to a source of supply. Each MAG is task organized for the mission assigned. In the wing there is a helicopter MAG, (MAG VH) and three Fighter/Attack MAG's (MAG VF/VA). The primary mission of the Helicopter MAG is to provide assault support for all Fleet Marine Force Units. The primary mission of a MAG (VF/VA) is to conduct anti-air warfare and offensive air support operations from advance bases, expeditionary airfields, and aircraft carriers. The MAG is the command element into which any type squadron may be task organized to perform assigned missions.

Headquarters and Maintenance Squadron (H&MS) provides the logistic and administrative support for units attached to the Marine Aircraft Group. The H&MS also has large propeller-driven transport aircraft and two-seat jet aircraft used for flight training.

The Marine Wing Headquarters Squadron (MWHS) provides administrative, supply support, and camp facilities for a Marine Wing headquarters and certain elements of the Marine Air Control Group. The MWHS also provides camp food service, motor transport, and utilities for all elements of the Marine Wing Headquarters and for the H&HS and MWCS of the MACG.

Marine Air Base Squadron (MABS) provides air base facilities and services for the MAG. The MABS also has attached to it administratively the Marine Air Tactical Control Unit (MATCU). The MATCU acts as the controlling agency for all aircraft landing and taking off. It also handles Ground Control Approach (GCA) landings of aircraft by radar when weather conditions preclude the aircraft's visual landing.

The Marine Fighter/Attack Squadron (VMFA) has dual missions of intercepting and destroying enemy aircraft under all-weather conditions and attacking and destroying surface targets, visually. They operate F–4 aircraft, which carry air-to-air missiles and have racks for air-to-surface ordnance.

The Phantom, F–4, has two turbojet engines with after-burners and travels at well over twice the speed of sound. There is a two man crew: pilot, Marine Aviator; and radar intercept officer, Marine Flight Officer, who rides in the rear cockpit. The Phantom may be either land or carrier based, and serves as both fighter interceptor and close support attack aircraft. Another ver-

This biplane, pictured over England, is representative of a U.S. Navy NC–4 which successfully made a trans-atlantic flight in 1919.

The early aviator above is flying an aircraft which was the forerunner of the AX–1 Bat Boat, the marines' first plane.

This picture, painted before 1902, depicts the very earliest type of naval aircraft.

The AD "SKYRAIDER" ATTACK BOMBER was used during the Korean War. It's 3,350 hp engine gave it an unprecedented rate of climb. It carried a pay load equal to that of the Flying Fortresses of WW II.

The F4U "CORSAIR" ATTACK FIGHTER was called the "Whistling Death" by the Japanese. It was the Marines' finest attack fighter of WW II. It was capable of flying 400 MPH with a full military load.

These F2H jet aircraft, pictured flying past Mt. Fuji, in Japan in 1957, were among the Marine Corps' earliest jet aircraft.

BELOW: *The R-4-Q was called the Flying Boxcar. This cargo carrier, shown landing at Cherry Point, N.C., was replaced by the KC-130.*

sion of the F–4 is used solely for reconnaissance, and is equipped with side-looking radar, an infra-red sensor, and a variety of cameras.

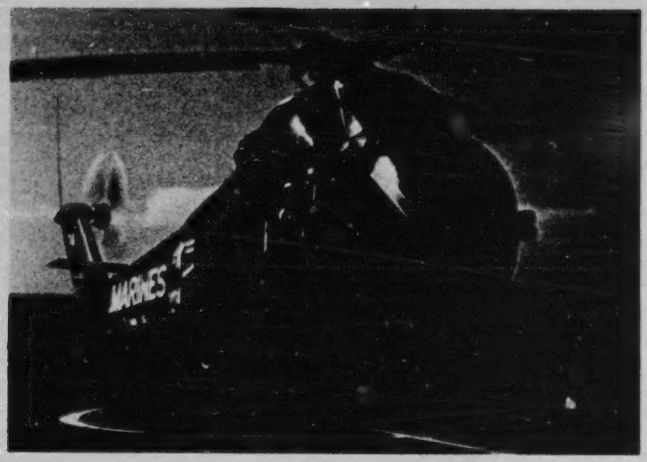
The Marine Attack Squadron (VMA) attacks and destroys surface targets, lays smoke, drops flares, conducts aerial spraying, visual observations, and air drops critical supplies. VMA squadrons operate A–4 or AV–8 aircraft which have 20mm or 30mm cannon and an ordnance delivery capability for all types of conventional, nuclear, and chemical munitions.

The Skyhawk, A–4, is small, fast, and extremely versatile. This aircraft has a single turbojet engine, a modified delta-platform wing, and a crew of one. The A–4 is a medium-range attack plane which can operate from either carrier or shore bases, and is so agile that it can practically be in the ground battle.

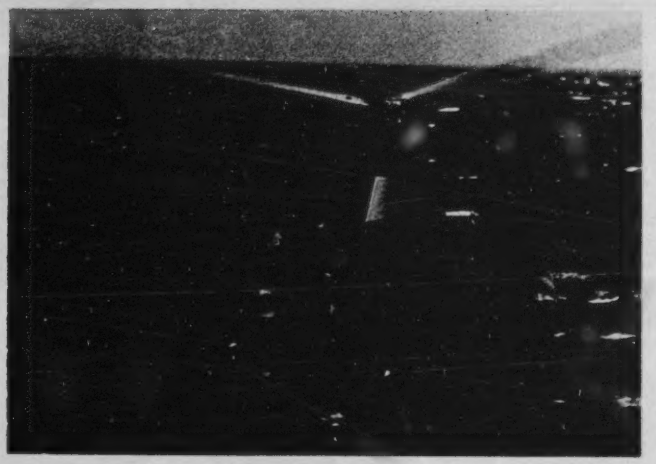
The Harrier, AV–8, is the newest aircraft in this impressive inventory of sky power. The Harrier is the world's first VSTOL (Vertical, Short Take-Off and Landing) operational jet aircraft. Because of its four vectored fan air nozzles under the wings, the AV–8 can rise from the ground like a helicopter, hover in midair, turn in any direction, and then move out for its primary mission of close air support for ground troops. With such unlimited flexibility the plane can take off from a small clearing, a carrier, a normal airfield of any length, or smaller ships equipped to handle it. It has a crew of one.

The Marine All-Weather Attack Squadron VMA (AW) attacks and destroys surface targets under all weather conditions. This type squadron uses the A–6 aircraft. The Intruder, A–6, is the Marine's all-weather attack aircraft. It has a two man crew; the pilot and

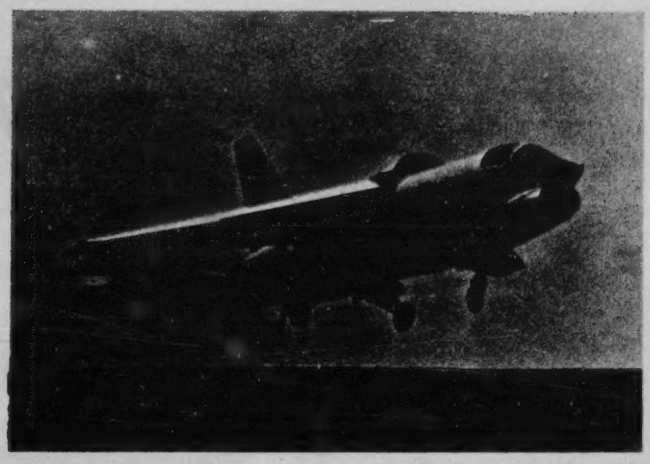
The CH–37 HELICOPTER was often times called the "flying garbage can" by Marine pilots. Entering Marine Aviation in the late 1950's, it carried troops and light-weight vehicles. It was noisy, slow and ugly. The CH–37 also saw service in Vietnam and was finally replaced with the CH–53 in late 1966.



UH–34 HELICOPTER. The UH–34 was the workhorse of the Marine Corps. It carried troops, lifted supplies and "medevaced" the wounded. It saw service in Vietnam and was phased out of the active Marine Corps in late 1969. The UH–34 was replaced by CH–46.



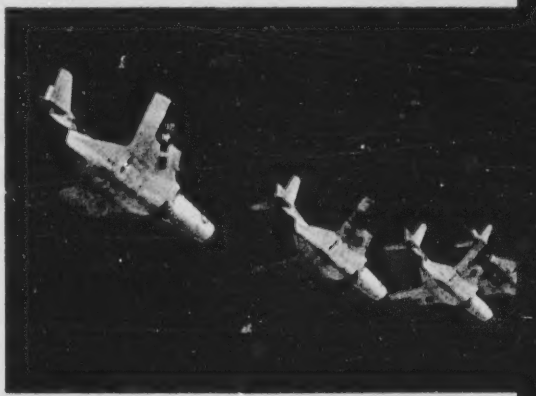
The OH–43D "HUK" helicopter was used by Marines in the 1950's for observation and reconnaissance. It was replaced by the UH–1 "HUEY."



The F–8 CRUSADER was a land/carrier based fighter which won fame when Col John Glenn, the Astronaut (then Maj Glenn), made the first transcontinental hop at Supersonic speeds in the late 1950's.

The T–34B mentor trainer plane is used by Navy and Marine student pilots in flight school at NAS, Pensacola, Florida. It is the first aircraft flown by student naval aviators.

The OE–1 observation aircraft, shown above flying over Camp Pendleton, California, was replaced in the 1960's by the OV–10 Bronco. The OE–1 was a stable and dependable observation and utility plane.



This formation of F9–J trainer planes is from El Toro, California. The F9–J was phased out of the Marine Corps inventory in the very early 1970's.

The SNB–8 Beechcraft passenger plane was used by both the Navy and Marine Corps. It was affectionately called "The Bug Smasher" by Marine pilots.

flight officer sit side by side. With its integrated attack-navigation and central digital computer system, called DIANE, the A–6 can locate, track, and attack small moving targets and larger fixed targets at night and under all weather conditions. Another version of the Intruder has the mission of suppressing enemy electronic activity, such as missile-seeking radar, and of gathering electronic intelligence. Fitted with different antennae the aircraft can detect, locate, record, or jam electronic emissions in order to provide protection for other aircraft and support ground forces with electronic information.

Headquarters and Maintenance Squadron (H&MS) is essentially the same as H&MS (VF/VA). It has no jet aircraft, nor does it rate a C–117 transport.

Marine Air Base Squadron (MABS) is essentially the same as MABS (VF/VA).

The Marine Observation Squadron (VMO) conducts aerial reconnaissance, observation, and forward air control operations to support the Landing Force in the ship-to-shore movement and in subsequent operations ashore. The VMO utilizes the OV–10 aircraft.

The Bronco, OV–10, has a primary mission of low level visual observation and reconnaissance. The pilot sits in the front cockpit; the observer in the rear cockpit operates a panoramic camera, message-drop equipment, and other special gear. Air control or artillery and naval gunfire spotting is also performed by the observer. The Bronco is an STOL (Short take-off and landing) aircraft which is powered by two turboprop engines. With modifications the observer's cockpit can carry 3,200 pounds of cargo or five Marine paratroopers; the OV–10 can also be armed and used for light suppressive fire missions or as an armed helicopter escort.

HELICOPTER SUPPORT

The military employment of the helicopter was fully realized in Korea in 1951, a Marine Corps first, and helicopter support has since become an integral part of the strategy and tactics of the Corps and of other services as well. Transporting combat troops and cargo from the rear to the front lines was the "chopper's" first job, but the versatile aircraft now manage everything from medical evacuation to intelligence reconnaissance and gunship attacks with equal ease. Helicopter support doctrine was developed in the close combat of Korea, and has been continually refined through the conflict in Vietnam to its present sophisticated state. The helicopter has changed forever the static aspect of warfare; properly employed, the helicopter gives the ground commander many advantages in projecting his combat power. The commander can now deliver fresh combat troops, in organized units, at great distances. He can utilize the "Chopper" flexibility and mobility to hit the enemy from any side, with speed and surprise, regardless of terrain, and he can resupply those combat personnel and support them with any need.

The Marine Light Helicopter Squadron (HML) augments the primary lift elements for the helicopter group and conducts command and control functions, casualty evacuation, search and rescue, and other tasks as directed.

The Marine Medium Helicopter Squadron (HMM) and Marine Heavy Helicopter Squadron (HMH) provide transportation for personnel, supplies, and equipment. The HMH is primarily tasked with the transportation of supplies and equipment.

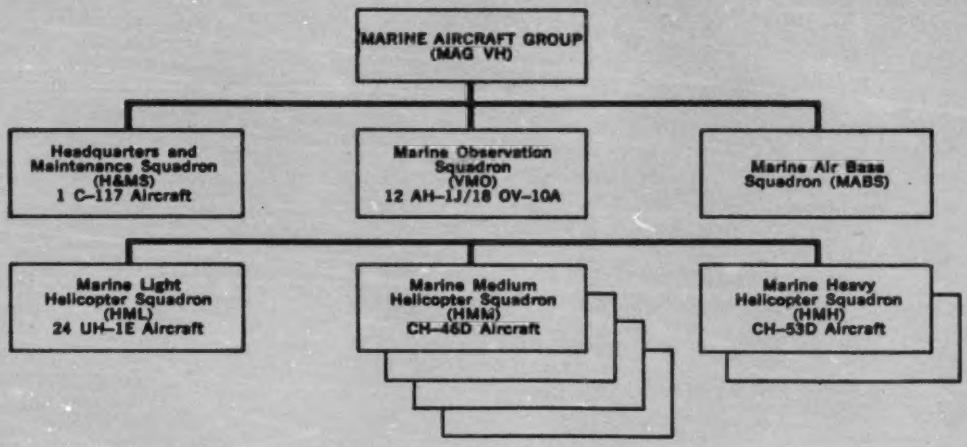
The workhorse of the Marine Corps helicopter fleet is the Huey, UH–1. Because of its speed, landing versatility,

The AH–1 HUEY "COBRA" provides fire support during aerial and ground escort operations and during ship-to-shore movements.

The UH–1 "HUEY" has many configurations and models. The UH–1 has a maximum range of 345 nautical miles.

The CH–46 HELICOPTER entered the Marine Corps in 1964. Its missions included troop airlifts, resupply, and med-evacs. In Vietnam it served along with the UH–34 and finally replaced it in 1969. The CH–46 has a max speed of 150 mph and a cruising range of 230 nautical miles. Its ceiling is 14,800 feet.

CH–53 HEAVY ASSAULT TRANSPORT HELICOPTER. The CH–53 is one of the Marine Corp's finest heavy helicopters. It was manufactured by Sikorsky. It has a cruising speed of 172 mph, a troop capacity of 38, a cargo capacity of 8,000 pounds and a combat radius of 100 miles. The CH–53 saw limited service in Vietnam.



and cargo and armament capabilities, the Huey is the real multi-use machine of Marine aviation. The UH–1 can carry ten combat troops, or 2,000 pounds of cargo; it cruises at 100 MPH, and has a maximum speed of 120 MPH. It carries a crew of two, pilot and copilot/gunner/observer, who sit side by side. With its two jet engines and flexible cargo area arrangement, the Huey is used for much more than troop and cargo transport; it also serves for medical evacuation, airborne command and control, search and rescue, escort, liaison, and courier missions.

The Sea Knight, CH–46, is a twin turbine-powered, tandem-rotor transport helicopter which carries 25 Marines or 5,000 pounds of cargo 100 miles. Pilot and copilot fly this chopper, in all weather, day or night. The Sea Knight has a rear ramp for rapid loading, and can land on the water if necessary.

The Sea Stallion, CH–53, is the largest and fastest helicopter transport in the Marine Corps. It carries 38 fully equipped Marines, or up to 14 tons of cargo, for 100 miles at speeds as high as 200 MPH. The CH–53 has a pilot and copilot, two turboshaft engines, and all-weather and automatic flight equipment.

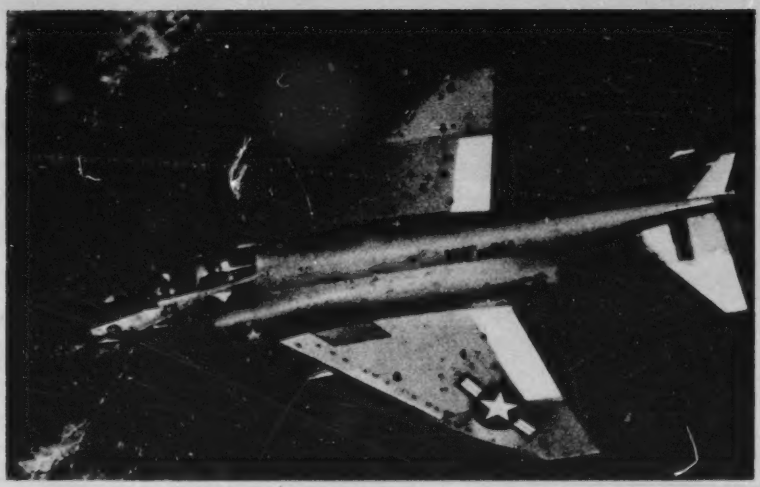
Marine Attack Helicopter Squadron (HMA) provides close-in fire support during aerial and ground escort operations and during ship-to-shore movement. The helicopter used for this vital mission is the Cobra, AH–1J. Flown by two Marine pilots, the Cobra utilizes its speed for quick reaction to suppress enemy ground fire; it can cruise at 185 MPH, and dive at 220 MPH. The gunner flies in the front cockpit in the AH–1J, firing machine guns, rockets, and a front turret mounted, three barreled 20MM Gatling gun. The Cobra is as ideal for escorting transport helicopters as it is for providing superior close support to ground Marines.

SPECIALIZED SQUADRONS

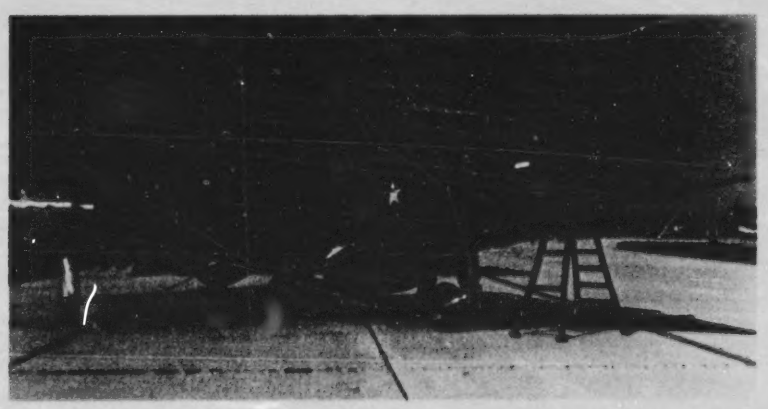
VMGR AND VMCJ

There are two squadrons which are not directly under a MAG. They are under the command and control of the Wing Commander.

Marine Aerial Refueler Transport Squadron (VMGR) has been reorganized to assume the logistics and maintenance support required for inde-



The F–4 "PHANTOM" ALL WEATHER, FIGHTER-ATTACK BOMBER is probably one of the most famous attack fighters in the world. Today, after nearly a decade, it is still the mainstay of U.S. aviation and in many foreign governments.



The AV–8 "HARRIER" ATTACK aircraft is capable of vertical take-off's and landings as well as regular long field takeoffs and landings.

pendent operations from an airfield. The squadron is equipped with 12 KC–130F aircraft. They provide aerial refueling of Marine tactical aircraft and Intra-theater transportion of personnel, equipment, and supplies.

Furthermore, the VMGR delivers combat cargo and emergency resupply by air drop between supply bases and small combat fields.

The Hercules, KC–130, is a powerful, flying giant capable of aerial refueling and long-range transport of troops or cargo. It has a range of 8,000 miles, cruising at 390 MPH. It can take-off and land on short runways, or dirt roads, and carry 92 battle-ready Marines, 30,000 pounds of cargo, or 9,250 gallons of jet fuel for midair refueling of any of the Marine Corps' attack aircraft. The Hercules has a crew of five, four turboprop engines, and a rear ramp to accommodate heavy equipment, vehicles, artillery pieces, or Marine paratroopers.

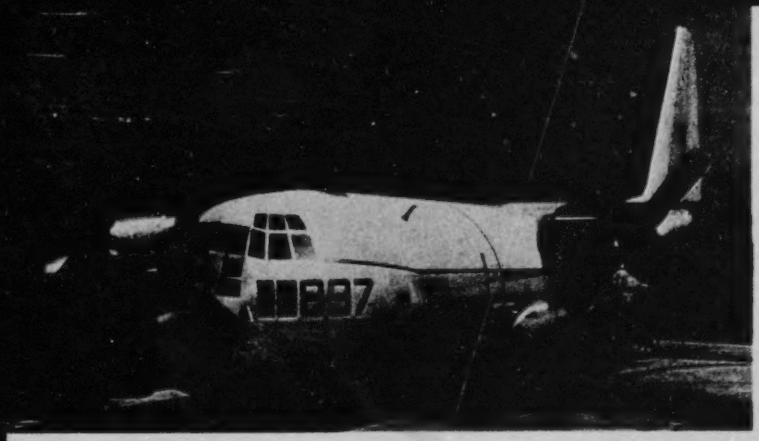
The Marine Composite Reconnais-

The A–4 "Skyhawk" is a one man medium range attack bomber.

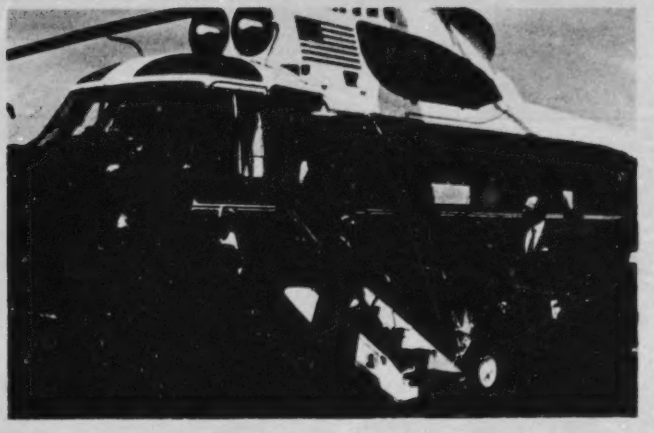
The OV–10 "BRONCO" is used primarily for reconnaissance, observation and forward air control operations.

sance Squadron (VMCJ) is usually attached directly to the wing, however, it may also be assigned to a MAG.

It is employed in support of strike aircraft and ground troops by suppressing enemy electronic detection and fire control systems, obtaining electronic intelligence, and conducting multi-sensor imagery reconnaissance. The squadron operates RF–4B aircraft and EA–6A aircraft. The special versions of the F–4 and A–6 aircraft have already been discussed. This squadron conducts day and night aerial photography for intelligence collection and damage assessment. It also conducts airborne electronic and communication operations which include Electronic Counter-measures (ECM) operations and Electronic Counter-Counter measures (ECCM). The special capabilities of the aircraft of this particular squadron are impressive. For instance, films of enemy positions may be processed in-flight and dropped to the nearby ground commander; complete up-to-date Electronic Order of Battle (EOB) information can be provided to the commander, giving him a list of all the enemy's electronic emitters in a particular area.



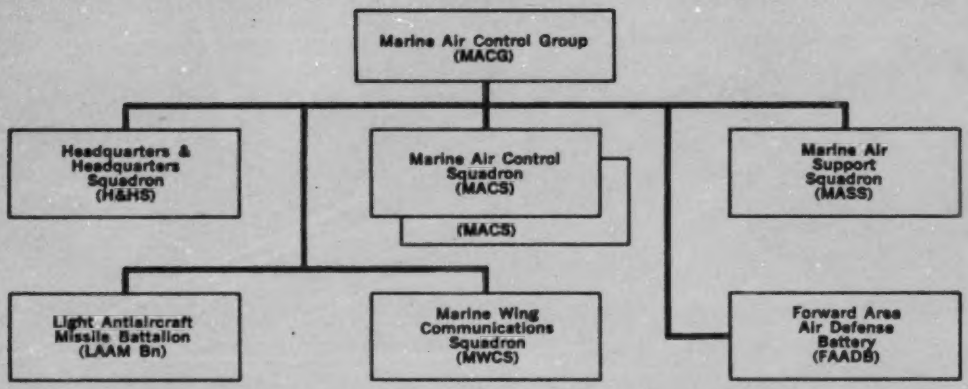
The KC–130 HERCULES is used primarily as an inflight refueler. In addition, it provides transportation for personnel, equipment and supplies. It has a top speed of 370 mph with a range of over 3,500 nautical miles.



Marine special helicopter squadron HMX–1 in Quantico, Virginia provides helicopter support to the President and White House aides and visitors. They fly a Sikorsky executive type VH–3A, as shown here.

LEFT: *The Navy's newest air superiority fighter aircraft, the F14–A TOMCAT, has a swing-wing capability. It is shown above in the straight wing configuration. The F–14 is expected to join the Marine Corps inventory in the late 1970's.*

BELOW: *The A–6 "INTRUDER" is used as an all weather attack aircraft and with VMCJ as a special electronics warfare aircraft.*


Marine Air Control Group (MACG)
Headquarters & Headquarters Squadron (H&HS)
Marine Air Control Squadron (MACS)
(MACS)
Marine Air Support Squadron (MASS)
Light Antiaircraft Missile Battalion (LAAM Bn)
Marine Wing Communications Squadron (MWCS)
Forward Area Air Defense Battery (FAADB)

THE MARINE AIR CONTROL GROUP

Marine Air Control Group (MACG) provides, operates and maintains the air command and control system of the Marine Aircraft Wing. The subordinate units of the MACG are: (1) the Marine Wing Communications Squadron (MWCS) which provides the communication for the Wing Headquarters and for the Wing Air Command and Control System, (2) the Headquarters and Headquarters Squadron (H&HS) which establishes the Tactical Air Command Center (TACC) and the Tactical Air Direction Center (TADC), (3) the Marine Air Support Squadron (MASS), with three Direct Air Support Centers (DASC), which provide all-weather air support direction from the ground, (4) the Marine Air Control Squadrons (MACS's) which establish the Tactical Air Operations Centers (TAOC), (5) the Light Anti-aircraft Missile Battalion (LAAM Bn), and (6) the Forward Area Air Defense Battery (FAADB) which provide close-in surface to air missile defense.

The Headquarters and Headquarters Squadron (H&HS, MACG) coordinates the air command and control system of the Marine Aircraft Wing. It also provides administrative and maintenance support for MACG units and the Marine Wing Headquarters Squadron (MWHS).

The Marine Air Support Squadron (MASS, MACG) provides facilities for the control of aircraft operating in close or direct support of ground units. It establishes and operates a Direct Air Support Center (DASC) to receive and coordinate requests for air support, including helicopter support.

The MASS operates three (3) Air Support Radar teams (ASRT). They utilize the TPQ–10 Radar Course Directing Central for electronic control of aircraft performing direct air support missions during periods of bad weather or restricted visibility conditions.

The Marine Air Control Squadron (MACS, MACG) has the mission of providing surveillance control of aircraft and surface-to-air missiles for anti-air warfare in support of the Fleet Marine Force. Each MACS is equipped to install and operate a Tactical Air Operations Center (TAOC) with the necessary electronics and communications equipment required for the detection, identification and control of aircraft. Furthermore, it provides enroute air traffic control for friendly aircraft, and maintains the capability to deploy and operate as an integral unit.

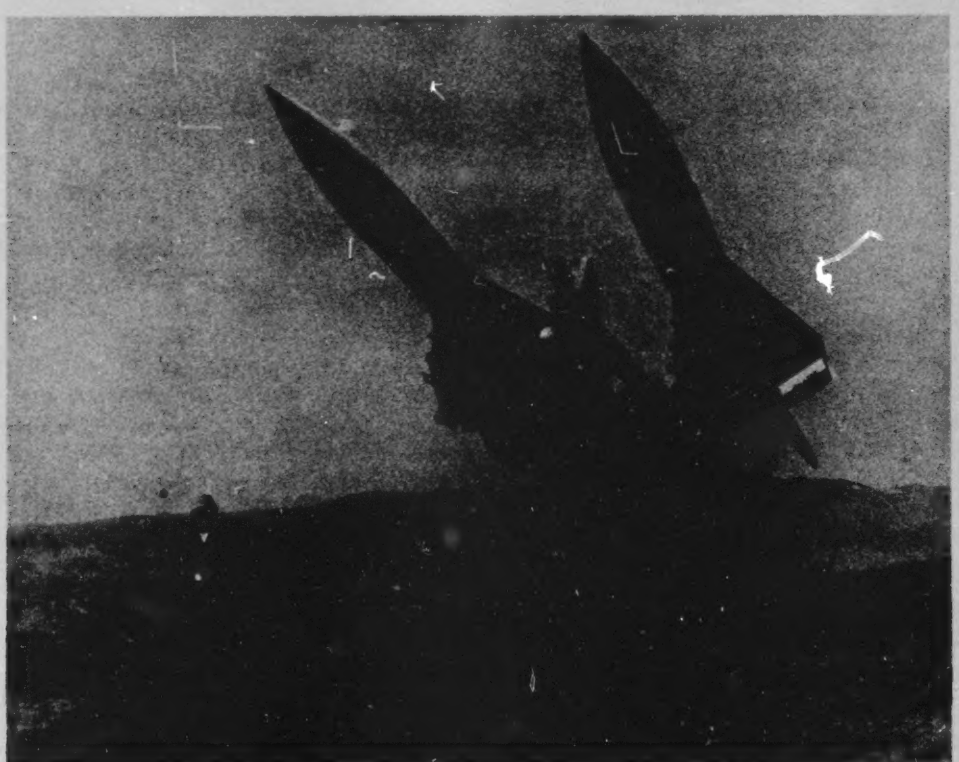
The Light Antiaircraft Missile Battalion (LAAM Bn) is under the com-

LIGHT ANTIAIRCRAFT MISSILE BATTALION

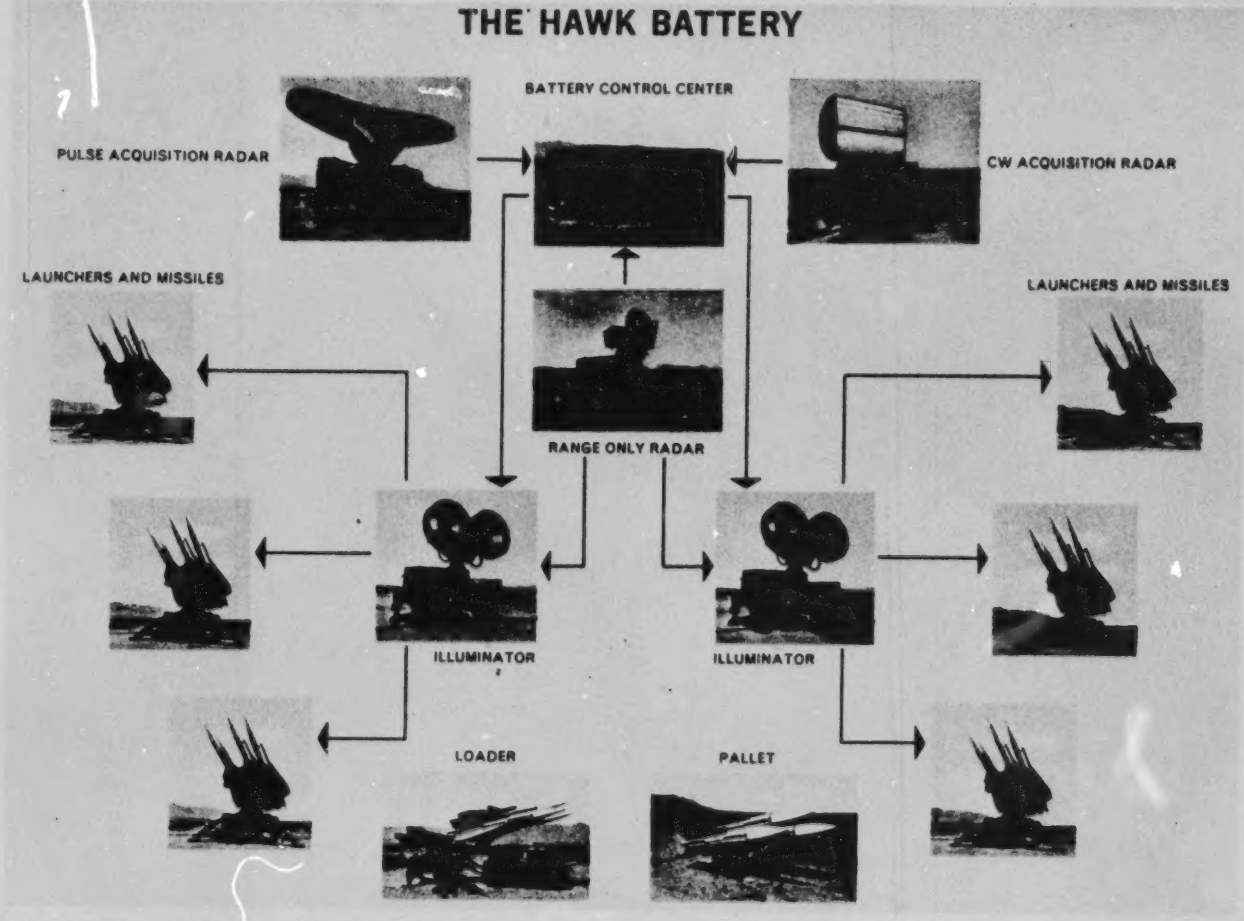
mand and control of the Marine Aircraft Wing Commanding General or as directed by him. At present the Wing Commanders have placed the LAAM battalions under the MACG.

The LAAM Bn provides medium range surface-to-air missile defense against low and medium altitude air attacks. It is organized and equipped for employemnt in an integrated air defense system supporting an amphibious force or may be employed in an independent mode of operation. Missile firing can be controlled from a Tactical Air Operations Center (TAOC) or a Battalion Anti-Aircraft Operations Center (AAOC).

To accomplish its assigned mission the LAAM Bn integrates HAWK surface-to-air missiles, medium and low-altitude acquisition radars, fire control radars, missile launchers, equipment



A twin HAWK missile unit is shown here elevated and poised, ready for firing. This missile is used by the light antiaircraft missile battalion.



The chain of control in an individual HAWK missile battery extends from radar acquisition of a target through range finding to launch of the missiles.

The REDEYE missile, shown here ready to fire, gives the ground commander a portable weapon for close defense against hostile aircraft.

for missile maintenance, transport, and missile loading into a semi-mobile and largely self-supporting unit.

The Forward Area Air Defense Battery (FAADB) employs the REDEYE guided missile system to provide close-in air defense protection. This portable, surface-to-air missile is fired from the shoulder like a bazooka. The missile is guided to its target by an infra-red heat-seeking device which homes on the heat from the aircraft engine or exhaust. The FAADB consists of a Battery Headquarters, a Service Platoon, and five REDEYE Platoons. The Battery is task organized to provide forward area air defense as an integral part of the Marine Corps anti-air warfare system.

MARINE WING SUPPORT GROUP

The Marine Wing Support Group (MWSG) consists of a Headquarters and Maintenance Squadron (H&MS) and a Wing Equipment and Repair Squadron (WERS). This support group provides services and support for wing units. The H&MS operates the wing flight section, maintains assigned aircraft and related equipment, provides camp facilities and utilities for the MWSG, and operates air freight and passenger facilities. The H&MS also provides organic communications, organic material, and data processing support. The WERS provides storage, maintenance, and training for Short Airfield for Tactical Support (SATS) launch and recovery equipment as required, and a motor transport/engineer maintenance section.

PASS IN REVIEW

The Marine Aircraft Wing is one of the American military's most flexible organizations, in keeping with the myriad types of support it provides to Marine Corps ground forces. With its variety of specialized groups and squadrons, utilizing the most sophisticated electronic equipment and a multitude of "can-do" aircraft, the MAW is capable of supporting any mission which could possibly be assigned to a Marine air/ground team.

a. What is the basic purpose of Marine aviation, and how is that purpose unique to Marine Corps aviators?

b. Discuss the differences in the organization of a division and a wing.

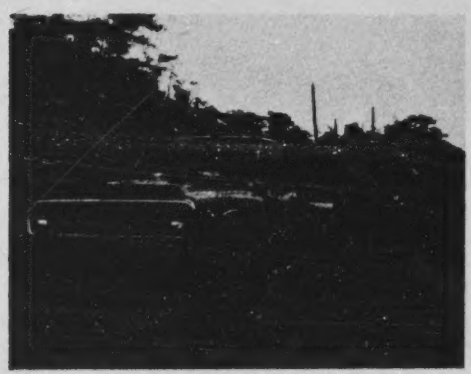
c. Why are there so many different types of Marine aircraft? Outline the varying functions of several basic types.

d. List some of the specialized types of squadrons which may be found in a MAW.

CHAPTER 12

HALT! WHO IS THERE

There is a phrase in the Marine's Hymn which goes, "If the Army and the Navy ever look on heaven's scene; they will find the streets are guarded by United States Marines." Guard assignments at the Pearly Gates and beyond are not guarantees that all Marines go to Heaven. However, this quote certainly indicates that guard duty is an important part of the mission of the Corps. One of the big reasons for this is that Marines not only provide the guard for their own bases, but also for all Naval installations, shipyards, ammunition dumps, and airfields. In addition permanent Marine detachments can be found aboard all United States cruisers and carriers. The primary duty of these detachments is to serve as security for the ship and its personnel.



This Marine from the Separate Guard Company, Marine Barracks, Philippine Islands, is typical of Marine sentries around the world. With his weapon at the ready he reports to the sergeant of the guard that the ammunition dump is all secure.

INTERIOR GUARD

Wherever a Marine is stationed, ashore or afloat, his commanding officer establishes and maintains an interior guard. This guard is charged with the preservation of order, protection of property, and the enforcement of orders and regulations. When you are on duty with an interior guard you are a member of a distinct organization with definite orders to carry out.

COMPOSITION OF INTERIOR GUARD

The interior guard may be composed of one or more main guards. The interior guard includes any special guards established by the commanding officer. If the commanding officer has a brig within his command, the brig guard is a part of the interior guard. One officer of the day will be assigned to supervise each main guard established ashore. Aboard ship, the officer of the deck assumes the duties of the officer of the day. In large commands ashore where there is more than one main guard, a field officer of the day may be assigned to supervise the entire guard.

ASSIGNMENT OF PERSONNEL

Each commanding officer who establishes a main guard, other than a com-

manding officer of a ship, shall assign daily a commissioned officer for duty as officer of the day (OOD). If sufficient commissioned officers are not available in the command, noncommissioned officers may be detailed to this duty. One or more assistant officers may be assigned whenever necessary. Officers or noncommissioned officers assigned as officers of the day or assistant officers of the day are notified of their assignments in person or by written orders well before their days of duty.

A commanding officer who has more than one main guard within his jurisdiction may assign daily a commissioned officer of the command for duty as field officer of the day. Officers so assigned must be senior to officers of the day of subordinate units. They are notified of their assignment in person or by written orders well before their days of duty.

Each commanding officer who establishes a main guard designates a unit within his command to provide the personnel for a specified period. Their assignments are made far enough in advance to allow the subordinate commander time for preparation and assignment. He will make the following assignments from his unit throughout the specified period:

(1) An officer or noncommissioned officer as the commander of the guard.

(2) A noncommissioned officer as sergeant of the guard.

(3) Three qualified enlisted men as corporals of the guard.

(4) When directed by the commanding officer, outstanding enlisted men other than noncommissioned officers will be detailed to perform duty as orderlies and similar tasks.

(5) A qualified enlisted man as field music, if required.

(6) A sufficient number of enlisted men as sentries for all reliefs.

(7) At least one enlisted man for each relief as a supernumerary.

(8) Appropriate personnel to fill prescribed administrative and brig posts.

The Commander of the guard will be senior to the sergeant of the guard, the sergeant of the guard will be senior to the corporals of the guard, and the corporals of the guard will be senior to sentries. The above assignments are published not later than the day before the day of assigned duty.

Upon publication of the assignments the sergeant of the guard assigns sentries to reliefs and the corporals of the guard assign sentries on their reliefs to posts.

Each commander who establishes a special guard follows the above described procedure for main guard assignments with appropriate modifications.

COMPOSITION OF MAIN GUARD

The main guard consists of sentries on post, supervisory and administrative personnel, and a reserve. The commanding officer prescribes the number of sentry posts. The necessary sentries to man posts are normally organized into three reliefs. Each relief is directly supervised by a corporal of the guard. The main guard is commanded by the commander of the guard who is assisted by the sergeant of the guard. Whenever the commanding officer determines that a commander of the guard is not required, he may eliminate that position in the guard structure. Aboard ship no commander of the guard is assigned. In such cases the sergeant of the guard performs the duties prescribed for the commander of the guard in addition to his own. The main guard always maintains a reserve. This re-

serve is one or more of the off-duty reliefs of the guard. If a command is not authorized a brig guard force, the prisoners may be placed under the jurisdiction of the main guard.

DUTIES OF SPECIAL GUARD

Special guards are detailed when it is impractical to use sentries from the main guard to guard property or an area. The commander establishing a special guard prescribes its composition. The senior commander of a troop organization embarked aboard ship and not a part of the authorized complement aboard ship establishes a special guard for the control of his men as the commanding officer of the ship may approve or direct.

GENERAL ORDERS

"TAKE CHARGE OF THIS POST"

In order that Marine sentries on duty anywhere in the world will have uniform guidelines to follow, eleven general orders have been established which, if obeyed to the letter, will cover any situation that may arise during a tour of duty.

General orders apply to all sentries of the main and special guards but not the brig guard. They are limited to the eleven set forth below. Commanding officers may suspend specific general orders which do not apply to a particular post. All members of the main and special guards are required to memorize, understand, and comply with the following general orders:

No. 1.—To take charge of this post and all government property in view.

No. 2.—To walk my post in a military manner, keeping always on the alert and observing everything that takes place within sight or hearing.

No. 3.—To report all violations of orders I am instructed to enforce.

No. 4.—To repeat all calls from posts more distant from the guardhouse than my own.

No. 5.—To quit my post only when properly relieved.

No. 6.—To receive, obey, and pass on to the sentry who relieves me all orders from the commanding officer, field officer of the day, officer of the day, and officers and noncommissioned (petty) officers of the guard only.

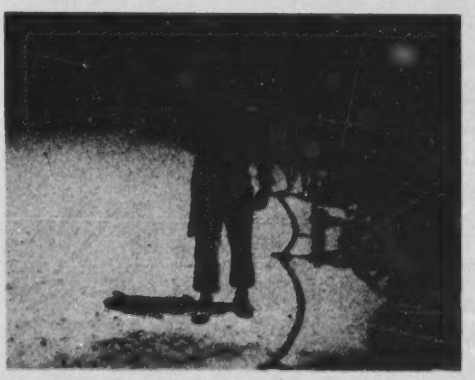
No. 7.—To talk to no one except in line of duty.

No. 8.—To give the alarm in case of fire or disorder.

No. 9.—To call the corporal of the guard in any case not covered by instructions.

No. 10.—To salute all officers, and all colors and standards not cased.

No. 11.—To be especially watchful at night and, during the time for challenging, to challenge all persons on or near my post and to allow no one to pass without proper authority.



"To take charge of this post and all government property . . ."; "To be especially watchful at night . . .". These are but two of the general orders which the walking sentry must obey, for he is responsible for everything that happens on his post.

SPECIAL ORDERS

Special orders apply to particular personnel of an interior guard. They are established by the commanding officer to prescribe special duties for main and special guard sentries not contained in the general orders.

Each member of the interior guard is required to understand and comply with special orders which apply to him.

Copies of special orders for the guard are posted conspicuously in the guardhouse for reference. A copy of the special orders for each sentry post will be available at each post. The special orders for each sentry post should describe and diagram the post's location and limits.

TOURS OF DUTY

"THE GUARD IS CORRECT"

The usual tour of duty for the officer of the day is 24 hours. For all personnel of the main guard the tour is also 24 hours. It starts when the commander of the guard is posted and ends when he is relieved. Reliefs of the main guard will each normally stand two 4-hour watches with 8 hours intervening between the end of one watch and the beginning of the other.

RELIEF OF PERSONNEL

The relief of personnel within an interior guard is accomplished either formally or informally.

Formal relief is the preferred method. It is carried out in a military manner which insures correct and complete transfer of verbal special orders, instructions, and information. The commanding officer directs personnel to be relieved formally.

The following procedure will be followed in a formal relief of personnel other than sentries. We shall use relief of the officer of the day as an example:

After the old officer of the day has effected the relief of the commanders of the guard, he and the new officer of the day shall report to the commanding officer or his representative. When presenting himself the old officer of the day will stand on the right of the new and both shall salute. The old officer of the day shall report, "Sir, (rank and last name) reports as old officer of the day." He then presents the guard report. As soon as he is relieved the old officer of the day salutes and retires. The new officer of the day then reports, "Sir, (rank and last name) reports as new officer of the day." As soon as he is posted, he salutes and retires.

The following procedure will be followed in a formal relief of sentries:

When the relief arrives and stops at the old sentry's post the new corporal of the guard indicates the post's number and says in a loud voice, "Number _____." The new sentry approaches the old and halts about 3 steps in front of and facing him. If armed with rifles both sentries then execute port arms. The new corporal of the guard places himself to one side of the sentries, faces between them and commands, "TRANSMIT YOUR ORDERS." The old sentry transmits any changes in orders, information or instructions received during his watch, or he states, "Post and orders remain the same." The new corporal of the guard then asks the new sentry, "Do you understand your orders?"

After the new corporal of the guard has made sure the sentry understands his orders he commands, "POST." If movement of weapons was previously executed, sentries then return them to an appropriate position. The new sentry assumes his duties, and the old sentry

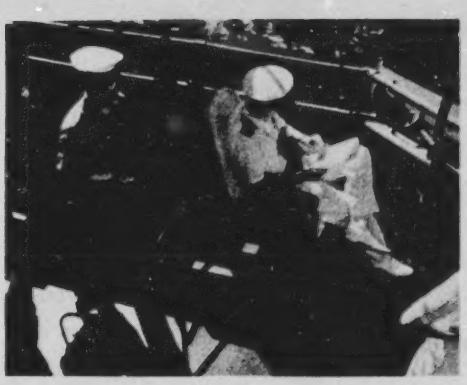
and the new corporal of the guard march to join the relief. Appropriate changes may be made in the above procedure when the sentry is motorized, or to conform to local conditions. When a posted sentry is armed with a pistol and insufficient pistols are available to arm the relieving sentry, the pistol will be transferred during the relief. Commanding officers will prescribe a safe procedure to accomplish the transfer.

In an informal relief the new sentry contacts the old sentry in person and asks, "Are you ready to be relieved?" When the old sentry is ready he tells the new sentry of all special orders, instructions, and information. As soon as the new sentry understands the orders he says, "I relieve you," he then assumes his duties. The old sentry goes directly to the corporal of the guard and reports the accomplishment of the relief.

GUARD ABOARD SHIP

Guard duty aboard ship is essentially the same as that ashore. However, the ship's captain is the top authority. It is his responsibility to designate guard posts he feels will best insure the safety and security of the ship and her personnel.

If the ship rates a Marine detachment, the Marines will perform all guard duty functions. If the ship has no detachment, the ship's personnel will be responsible for the guard.



The Admiral's orderly is part of the ship's Marine detachment, assigned to serve as guard for the ship and to protect the property of the ship as required by the ship's captain.

When a guard is placed at a gangway he will salute all officers coming aboard or departing the vessel.

The guard mount or the posting of the guards follows the ceremony for the informal guard mount ashore. Reliefs are posted informally by direct order.

Marine detachments are assigned as a part of the complement aboard certain ships of war for duty with the gunnery department, and for guard duty as the ship's captain may direct.

There is no regularly assigned officer of the guard. The guard of the day functions directly under the officer of the deck. However, the Marine Officer commanding the detachment is responsible for the supervision and performance of guard duty by his Marines. The detachment officer visits sentries frequently to insure they have a thorough understanding of their orders and duties.

PASS IN REVIEW

Guard duty is a basic responsibility for any military organization; such duty is a primary function of many Marine units, for Marines are tasked with the security of not only their own installations, but those of the Navy and others as well. Whether at a small post or station, at an embassy overseas, or aboard an admiral's flagship, the sight of a Marine Corps sentry on post is familiar around the world. The basis of guard duty, of providing security, is control. Control is provided by knowing, and doing, all manner of things well. The leader is one who exercises control over a group of men, and his function is especially important when that group of men controls our nation's property.

a. Name some of the various sorts of installations guarded by Marines.

b. List some of the different jobs to be filled in every interior or main guard organization.

c. What are the primary duties of a sentry, as outlined by the eleven general orders—how do special orders differ from general orders?

d. What are the essential elements of a guard relief—what must be done, by whom?

CHAPTER 13

TO MAINTAIN ORDER

THE MILITARY POLICE

Although all military organizations are based on proper discipline and obedience to orders, there is a need for a special organization to see that laws and regulations are enforced. Unit commanders have enough to do without establishing their own police units. Therefore, military police forces have been established within each of the services to maintain order and ensure the proper conduct of the service members.

The history of the military police in this country is as old as the nation itself. During the Revolutionary War a Provost Corps was established to enforce rules, orders, and regulations of the Continental Army. About the same time, the "Marechausie Corps" (a mounted constabulary) was established "to apprehend Deserters, Maruders (sic), Drunkards, Rioters, and Stragglers."

As time went on, additional duties were placed on the Provost Corps. During the War of 1812, a Commissary General of Prisoners was established, and during the Civil War a Provost Marshal General was appointed whose primary function was the enforcement of draft laws. Subordinates were also charged with apprehending deserters and spies, reporting treasonable practices, and recovering stolen government property.

Between wars, the importance of the Provost Corps and the office of Provost Marshall declined, usually to the point of being eliminated altogether, and the functions of the office were taken up by the individual unit commanders. After World War II all this was changed and now each of the services has its own military police. The Navy has its Shore Patrol, the Air Force its Air Police and the Army and Marine Corps their Military Police, all with similar duties and functions.

ORGANIZATION

As indicated in the history of the military police, since their inception, they have come under the control of a provost marshal. On a post or station he is the one who is responsible for the operations of the MPs and, in general, performs much the same as a chief of police. He may have a deputy provost marshal, and under him are an administrative branch and an operations branch. Within the operations branch are the enforcement, traffic, and registration sections which we will explore in more detail. Operations also controls the activities of the Criminal Investigation Department which performs in the same manner as a detective squad on a civilian police force. Although the Marine Corps does not employ sentry dogs outside of combat areas, it does use dogs that are trained to locate, or "sniff out," illegal supplies of drugs such as marijuana, and these dogs are handled

by the MPs. The one area of police work that does not involve the MPs in the Marine Corps is that of jail, or brig, guards. That duty is usually provided by a base or headquarters unit.

THE MAN ON THE BEAT

Like the police force in the civilian world, the functions of the military police rely heavily on the performance of the individual. It is he who represents the authority of the command in the maintenance of order. It is a considerable responsibility that the MP takes upon himself, for the situations that he finds himself in usually have to be handled with a combination of tact, firmness, and understanding. The MP must be careful not to abuse the authority that is vested in him. As we have read, the observance of rank is part of military life, but with the MPs, a lance corporal can give orders to officers, if providing safety and establishing order require it.

In certain towns and cities next to military bases, the MPs work closely with the civilian police in maintaining order within the community. Each force is governed by its own set of rules and regulations, but to be effective they must work together with a thorough understanding of each other's capabilities and limitations.

TRAFFIC CONTROL

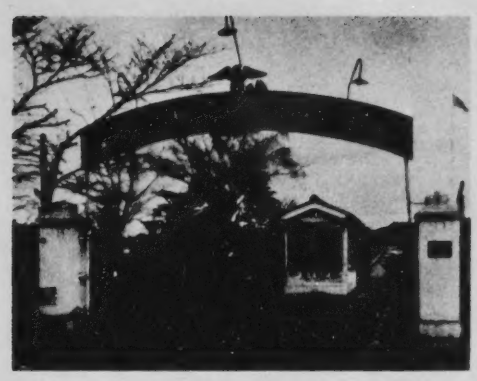
One of the primary functions of the MPs that is exercised on a daily basis is that of traffic control. Be it the rush hour traffic on some post or station or a muddy crossroads in some foreign land, it is the MP who keeps the traffic moving with his brisk arm and hand signals. He is also the man who takes charge when an automobile accident has occurred, taking down all the information

This Marine MP shown on traffic duty in Okinawa is responsible not only for controlling military traffic, but he must also direct and assist drivers on the civilian highway adjacent to the military base.

and seeing to the welfare of the victims. Traffic control can also extend to vehicular movement off the base. Large convoys are often seen on our roads and highways and depending on the destination and routes, the MPs are there to provide guidance and control. Vehicle registration is usually a function of the base Provost Marshal's office. This process ensures that all vehicles belonging to base personnel are properly accounted for.

INTERNAL SECURITY

Another familiar figure aboard a base, be it Marine or Navy, is the sentry at the gate. Even if it is an "open" gate with unrestricted access by all who want to enter, he is still there to provide directions and exercise control if needed. Most military bases require some sort of identification, usually a bumper sticker, before a vehicle



Marine military police serving as gate sentries, such as these two shown on duty at a base in Japan, are a familiar sight at Navy and Marine posts and stations everywhere.

is allowed to enter, and it is up to the MP at the gate to wave on the authorized cars and issue passes to visitors. The individual commands aboard the base have their own security in the form of duty officers or duty NCOs who maintain an after-hours watch of their commands, but the MP's usually provide a roving motorized patrol that provides the security of the whole base.

APPREHENSION AND CONFINEMENT

As in every community, and the military is one large community, there are those who become subject to apprehension and confinement. They either violate the law or become unruly to the extent that they must be taken into custody. When such a situation arises, the MP is called upon to exercise his authority and discretion. Depriving a man of his liberty is always a serious matter, so the MP, like the civilian police, must have knowledge of the law and the rights of the people involved. Procedures for apprehension, booking, and confining are very similar to civilian procedures, however, since an individual's commanding officer also retains certain restrictive and punitive authority, he may be turned over to his CO for proper action. Once a man is apprehended and taken into custody, he comes under the jurisdiction of the MP's. If the situation requires it, the man may be confined to the base, to his barracks, or placed in the brig to wait judicial action by the appropriate authority. During times of war, prisoner of war camps and compounds are also run by the MPs.

CIVIL DISTURBANCE AND DISASTERS

Military police on duty are authorized and directed to put down disturbances and riots among military personnel and other persons coming under military authority, or to remove military personnel from the scene of disturbance or riots among civilians. They will not attempt to stop a disturbance that involves civilians unless so directed by their commanding officer. The MP's, however, will protect government property at all times. Under conditions where disturbances outside of military jurisdiction reach such proportions that state and local authorities cannot maintain law and order, military forces can be called in by the appropriate governmental agencies.

Assistance in civil disaster relief is primarily the responsibility of state and local governments, the Red Cross, and similar agencies. If, however, the conditions resulting from a disaster are so extensive that these agencies cannot cope with them, military forces may be used to aid civil authorities. You often read in the newspapers about the National Guard being called out to provide law, order and assistance in times of emergency. The military police are there too.

PROTECTION OF GOVERNMENT PROPERTY

One main purpose runs through all the functions of the military police, and that is the protection of government property. The word "property," in this case, covers many, many areas because practically everything connected with a base or installation belongs to the government. Although certainly not regarded as property, personnel within the military, or working for it, are part of the government and earn the protection of the military police. In general, the efforts of the MP's could be compared to those of a community police force with national responsibilities—providing law and order within a command, but prepared to serve outside the base if so authorized. As very visible representatives of the command, the MP's set and maintain high standards for themselves both in dress and conduct. They are a proud unit and deservedly so.

PASS IN REVIEW

The military policeman serves much the same function as does his civilian counterpart, but he does it in a different place for different people. Recognizing and understanding the part of the MP in the daily conduct of business within the military, and ensuring that those you lead cooperate fully with the military police, is part of your job, as you are responsible for the welfare of your men, in the same way that the MP is responsible for the protection of government property and the safety of government employees.

a. Why should the military have a separate police branch—why couldn't any soldier, sailor, airman, or Marine do the job?

b. Compare civilian police with military police.

c. Under what circumstances can an MP give orders to someone senior in rank?

d. List some of the typical duties of the military policeman.

CHAPTER 14

LAND NAVIGATION

WHAT IS A MAP?

What traveling in and around your home town, or in a strange town, if you lose your way all you have to do is ask directions at a gas station or from a friendly native. You may have to overcome a few wrong directions thrown in with the right ones, but you are sure of eventually finding your way.

In combat, or out in the "boondocks", gas stations and friendly natives may be hard to come by, so you have to look elsewhere for information on where you are or where you are going. Your prime source for this information is a map. With a map—and a compass—and the knowledge of how to use both properly, you have all the material you need to navigate in unfamiliar territory.

Now just what is a map? One definition is, "a mathematically determined presentation of a portion of the earth's surface systematically plotted to a scale upon a plane surface." To put that in simpler terms, a map is a picture. It isn't a puzzle and it isn't hard to read. It is a picture of the land and the things on the land. When we look at it we are looking at a picture of the ground from a spot high in the air. The thing that confuses us at first is that although the map is a picture of the land, there are a great many symbols and diagrams that you would not find should you stroll through the land depicted. However, you can find what the symbols stand for by reading the information on their meaning in the margins of your map.

MARGINAL INFORMATION

Before going into the information in the margins, there are a few definitions you should be familiar with. The most important one is the term, scale. All military maps, and many civilian maps, are categorized by scale and type.

The scale of a map is expressed as a fraction and gives the ratio of map distance to ground distance. The terms "small scale," "medium scale," and "large scale" may be confusing when read in conjuction with numbers. However, if the number is read as a fraction, the picture becomes a little clearer. For instance, you know that 1/20th of something is smaller than 1/2 of it. The same holds true when comparing a 1:75,000 scale map to a 1:50,000 scale map. The larger the number after the 1:, the smaller the scale of the map.

Before placing into use any piece of equipment, an intelligent operator always reads the manufacturer's book of instruction. This is also true with maps. The instructions are placed around the outer edges of the map and are known as marginal information. All maps are not the same, so it becomes necessary, every time a different map is used, to examine the marginal information carefully.

Sheet name. The sheet name is found in two places: the center of the upper margin and the right side of the lower margin. Generally, a map is named after its outstanding cultural or geographic feature. Whenever possible the name of the largest city on the map is used.

Sheet number. The sheet number is found in the upper right margin and is used as a reference number for that map sheet. For maps at 1:00,000 scale and larger, sheet numbers are based on an arbitrary system which makes possible the ready orientation of maps at scales of 1:100,000, 1:50,000 and 1:25,000.

Series names and scale. The map series name is found in the upper left margin. A map series usually comprises a group of similar maps at the same scale and on the same sheet lines or format designed to cover a particular geographic area. It may also be a group of maps to serve a common purpose, such as the military city maps. The name given a series is that of the most prominent area. The scale note is a representative fraction which gives the ratio of a map distance to the corresponding distance on the earth's surface. For example, the scale note 1:50,000 indicates that one unit of the measure on the map equals 50,000 units of the same measure on the ground.

Series number. The series number appears in the upper right margin and the lower left margin. It is a comprehensive reference expressed either as a four digit numeral (e.g., 1125), or as a letter, followed by a three or four digit numeral (e.g., M661; T7110).

Edition number. The edition number is found in the upper margin and in the lower left margin. It represents the age of the map in relation to other editions of the same map and the agency responsible for its production. The latest edition will have the highest number. EDITION 3–AMS indicates the third edition prepared by Army Map Service. Edition numbers run consecutively; a map bearing a higher edition number is assumed to contain more recent information than the same map bearing a lower edition number. Advancement of the edition number constitutes authority to rescind or supersede the previous edition.

Bar scales. The bar scales are located in the center of the lower margin. They are rulers used to convert map distance to ground distance. Maps have three or more bar scales, each in a different unit of measure.

Credit note. The credit note is in the lower left margin. It lists the producer, dates, and general methods of preparation or revisio This information is important to the map user in evaluating the reliability of the map as it indicates when and how the map information was obtained. On some recent 1:50,000 scale maps, the map credits are shown in tabular form in the lower margin, with reliability information presented in a coverage diagram.

Adjoining sheets diagram. Maps at all standard scales contain a diagram which illustrates the adjoining sheets. This diagram varies with different scale maps but consists of as many rectangles as it takes to surround the rectangle which represents the sheet under consideration.

Index to boundaries. The Index to Boundaries diagram appears in the lower or right margin of all sheets 1:100,000 scale or larger. This diagram, which is a miniature of the map, shows the boundaries which occur within the map area, such as county lines and state boundaries. On 1:250,000 scale maps, the boundary information is included in the Location Diagram.

Grid note. The grid note is located in the center of the lower margin. It

gives the information pertaining to the grid system used, the interval of grid lines, and the number of digits omitted from the grid values. Notes pertaining to overlapping or secondary grids are also included when appropriate.

Grid reference box. The grid reference box contains instructions for composing a grid reference.

Legend. The legend is located in the lower left margin. It illustrates and identifies the topographic symbols used to depict some of the more prominent features on the map. The symbols are not always the same on every map. To avoid error in the interpretation of symbols the legend must always be referred to when a map is read.

Declination diagram. The declination diagram is located in the lower margin of large-scale maps and indicates the angular relationships of true north, grid north, and magnetic north. On maps at 1:250,000 scale, this information is expressed as a note in the lower margin.

User's note. A user's note is located in the center of the lower margin. It requests cooperation in correcting errors or omissions on the map. Errors should be marked and the map forwarded to the agency identified in the note.

Unit imprint. The unit imprint, located in the lower right margin, identifies the agency which printed the map and the printing date. The printing date should not be used to determine when the map information was obtained.

Contour interval. The contour interval note appears in the center of the lower margin. It states the vertical distance between adjacent contour lines on the map. When supplementary contours are used, the interval is indicated.

Special notes or scales may be added to the marginal information to aid the map user. The following are examples:

(a) *Glossary.* A glossary is an explanation of technical terms or a translation of terms on maps of foreign areas where the native language is other than English.

(b) *Classification.* Certain maps require a note indicating the security classification. This is shown in the upper and lower margins.

(c) *Protractor scale.* A protractor scale may appear in the upper margin on some maps. It is used to lay out the magnetic-grid declination for the map which, in turn, is used to orient the map sheet with the aid of a magnetic compass.

(d) *Elevation guide.* On some maps at scales of 1:100,000 and larger, a miniature characterization of the terrain is shown by a diagram in the lower right margin of the map. The terrain is represented by bands of elevations, and major drainage features. The elevation guide provides the map reader with a means of rapid recognition of major land forms.

(e) *Special notes.* A special note is any statement of general information that relates specifically to the mapped area. For example: Rice fields are generally subject to inundation; however, they may be seasonally dry.

SYMBOLS

The purpose of a map is to permit one to visualize an area of the earth's surface with pertinent features properly positioned. Ideally, all the features within an area would appear on the map in their true proportion, position, and shape. This, however, is not practicable because many of the features would be unimportant and others would be unrecognizable because of their reduction in size. The mapmaker has been forced to use symbols to represent the natural and man-made features of the

earth's surface. These symbols resemble, as closely as possible, the actual features themselves, but as though viewed from above.

To facilitate the identification of features on the map by providing a more natural appearance and a contrast, the topographic symbols are usually printed in different colors, with each color identifying a class of features. The colors vary with different types of maps, but on a standard large-scale topographic map, the colors used and the features each represents are—

(1) Black—the majority of cultural or man-made features.

(2) Blue—water features such as lakes, rivers, and swamps.

(3) Green—vegetation such as woods, orchards and vineyards.

(4) Brown—all relief features such as contours.

(5) Red—main roads, built-up areas, and special features.

(6) Occasionally other colors may be used to show special information. These, as a rule, are indicated in the marginal information. For example, aeronautical symbols and related information for air-ground operations are shown in purple on Joint Operations Graphics.

In the process of making a map, everything must be reduced from its actual size on the ground to the size at which it appears on the map. This requires, for purposes of clarity, that some of the symbols be exaggerated. They are positioned, however, so that the center of the symbol remains in its true location. An exception to this would be the position of a feature adjacent to a major road. If the width of the road has been exaggerated, then the feature is moved from its true position to preserve its relation to the road.

In addition to the topographic symbols used on maps to represent the natural and man made features of the earth, military personnel require some method for showing the identity, size, location, and movements of troops and military activities and installations. The symbols used to represent these military features are known as military symbols. Normally, military symbols are not printed on maps because the features and units that they represent are constantly moving or changing; military security is also a consideration. They do appear on special maps and overlays. The map user draws them in, in accordance with proper security precautions.

RIGHT UP

In a town or city, it is easy for us to tell someone that the church is at the corner of 6th Avenue and 3rd Street. If you made a date with someone to meet you at the church, you could be pretty sure that both you and your date would be able to find the place.

In the Marine Corps, however, we are faced with a different problem. We must be able to give to someone else the location of a lone tree in the middle of a large field, or a machine gun or sniper in a woods or a guard along a stream. There are no streets in those places, but our maps have a system for letting us tell someone else where these points are.

The Grid System. Location of a specific point is accomplished by placing on the face of the map a network of lines in the form of squares. These squares are somewhat like the blocks formed by the street system in a city. Any point on the map can be located in relation to these lines or "streets". The method of describing a location is practically the same as we use in a town with real streets. The only differences are in the way we name our "street" and in the way we "spell-out" the description.

Such a method is called a grid reference system, and the pattern formed by the lines is called a grid. There are several types of grids used on our maps. The most common is the Universal Transverse Mercator Grid. You will also find many maps bearing British Grids. But don't get confused by this—as far as grid referencing is concerned, all grids look alike in that they are made up of lines forming squares.

The "streets" in a grid all have very simple names. The names are all numbers. When we use these numbers to locate a point on the map we say we are giving a grid reference, just as we would give a street address in a town. Before we can use these numbers, however, we must learn a few simple facts and rules.

Every tenth grid line is made darker in print. This is to help you find the line you are looking for.

Each grid line on the map has its own number. This number appears in the margin of the map at both ends of the line. It also appears within the map on the line itself. You will notice that some figures are larger than others. As far as we are concerned we can ignore the smaller-sized figures; they have nothing to do with grid referencing. Always use only the LARGE figures to "name" a grid line.

In working a sample grid reference, you should follow a simple rule of map reading. The rule is "READ RIGHT UP". This rule helps us to remember which number to read first in giving a grid reference or in following out a grid reference.

Suppose your platoon leader tells you to meet a patrol at a point which he refers to as 477336. Mentally break the number down to read 47–7 33–6. You look at the map and read RIGHT until you come to the VERTICAL grid line which is numbered 47. Still going to the RIGHT, estimate 7 tenths of the distance between "line 47" and the vertical line to the right, which, of course, is "line 48". Then from this point read up until you come to the horizontal line which is numbered 33. Still going UP, estimate 6 tenths of the distance between "line 33" and the next horizontal line above, which of course, is "line 34".

If you understand everything that has been explained, you know how to state and how to follow a reference given on a map at the scales of 1:50,000, 1:25,000, or larger. Sometimes you can use our street system just to locate quickly a big, easily identified object. Just as you might tell a friend to meet you at the downtown library rather than give him an exact address, you can identify a particular location on a map by a general location. You just use the two Grid Lines that form the lower left hand corner of the grid square containing the thing you describe ("in Grid Square 47–33").

At first glance, the grid reference system seems to chop a map up into unnecessary fragments. However, if you master the few simple rules you have just learned, reading a military map becomes easier than reading a highway map from your neighborhood gas station.

WHICH NORTH?

In order to measure anything there must always be a starting point or zero measurement. To express a direction as a unit of angular measure there must be a starting point or zero measure and a point of reference. These two points designate the base or reference line. There are three base lines: true north, magnetic north and grid north. Those most commonly used are magnetic and grid; magnetic North is used when working with a compass, and grid North

is used when working with a military map.

a. True north—a line from any position on the earth's surface to the north pole. All lines of longitude are true north lines. True north is usually symbolized by a star.

b. Magnetic north—the direction to the North Magnetic Pole, as indicated by the north-seeking needle of a magnetic instrument. Magnetic north is usually symbolized by a half arrowhead.

c. Grid north—the north that is established by the vertical grid lines on the map. Grid north may be symbolized by the letters GN or the letter Y.

AZIMUTHS AND DECLINATION

The most common military method of expressing a direction is by using azimuths. An azimuth is defined as a horizontal angle, measured in a clockwise manner from a north base line. When the azimuth between two points on a map is desired the points are joined by a straight line and a protractor is used to measure the angle between grid north and the drawn line. This measured angle is the grid azimuth or the azimuth of the drawn line. When using an azimuth, the point from which it orignates is imagined to be the center of the azimuth circle. Azimuths take their name from the base line from which they have been measured; true azimuths from true north, magnetic azimuths from magnetic north, and grid azimuths from grid north. Therefore, any one given direction can be expressed in three different ways, a grid azimuth if measured on a military map, a magnetic azimuth if measured by a compass, or a true azimuth if measured from a meridan of longitude.

A back azimuth is the reverse direction of an azimuth. It is comparable to doing an "about face." To obtain a back azimuth from an azimuth, add 180° if the azimuth is 180° or less, or subtract 180° if the azimuth is 180° or more. The back azimuth of 180° may be stated as either 0° or 360°.

A declination diagram is placed on most large-scale maps to enable you to orient the map properly. The diagram shows the interrelationship of magnetic north, grid north, and true north. On medium-scale maps declination information is shown by a note in the map margin.

Declination is the angular difference between true north and either magnetic or grid north. There are two declinations, a magnetic declination and a grid declination.

The declination diagram contains three prongs representing magnetic north, grid north, and true north.

G-M Angle. An arc, indicated by a dashed line, connects the grid north and the magnetic north prongs. The value of this arc—the grid-magnetic angle (G-M ANGLE)—states the size of the angle between grid north and magnetic north and the year it was prepared. This value is expressed to the nearest 1/2°, with mil equivalents shown to the nearest 10 mils; a mil being 1/6400 of the circumference of a circle.

Grid Convergence. An arc, indicated by a dashed line, connects the prongs for true north and grid north. The value of the angle for the center of the sheet is given to the nearest full minute with its equivalent to the nearest mil. These data are shown in the form of a grid convergence note.

Conversion Notes. Notes may also appear in conjunction with the diagram explaining the use of the G-M angle. One note provides instructions for converting magnetic azimuth to grid azimuth and the other note, for converting grid azimuth to magnetic azimuth. The conversion (add or subtract) is governed by the direction of

the magnetic north prong relative to that of the grid north prong.

The grid north prong is always alined with the North-South grid lines on the map, and on most maps is formed by an extension of North-South grid line into the margin. The angles between the prongs, however, are seldom plotted exactly. The relative position of the directions is obtained from the diagram, but the numerical value should not be measured from it. For example, if the amount of declination from grid north to magnetic north is 1°, the arc shown in the diagram may be exaggerated; if measured, it may have an actual value of 5°. The position of the three prongs in relation to each other varies according to the declination data for each map.

It is often necessary to convert from one type of direction to another. A magnetic compass reading gives a magnetic azimuth, but to plot this line on a gridded map, the magnetic azimuth value must be changed to a grid azimuth. The reverse is true when orientation is taken from the map; the grid azimuth measured from the map must be converted to a magnetic azimuth for use with magnetic compass. The declination diagram is used for these conversions. Most maps include with the diagram the grid-magnetic (G-M) angle and notes explaining its use to convert from one azimuth to another. On older sheets which do show this information, it is necessary to determine whether to add or subtract the difference to the given azimuth to obtain the desired one. A rule to remember when solving such problems is this: no matter where the azimuth line points, the angle to it is always measured clockwise from the reference direction (base line). With this in mind, the problem is solved in three easy steps:

1. From the apex of the declination diagram draw an arbitrary line at roughly right angles to the general direction of north, regardless of the actual value of the azimuth in degrees. The position of the arbitrary line in relationship to the declination diagram is of little importance. It is both simple and correct to use such an arbitrary line to represent the azimuth line. Remember that the line itself does not change position, but its angular value is changed because of measurement from different reference directions.

2. Complete the diagram by drawing an arc from each reference line to the arbitrary azimuth line. A glance at the completed diagram shows whether the given azimuth or the desired azimuth is greater, and thus whether the known difference between the two must be added or subtracted.

3. After the correct conversion rules have been determined, they should be noted in the map margin adjacent to the declination diagram for future reference.

A MAP IS NOT FLAT

A knowledge of map symbols, grids, scale, and distance gives enough information to identify two points, locate them, measure between them, and determine how long it would take to travel between them. But what happens if there should be a 300-foot cliff between the two points? The map user must also become proficient in recognizing the various landforms and irregularities of the earth's surface and be able to determine the elevation and differences in height of all terrain features.

(1) *Datum plane.* This is a reference from which vertical measurements are taken. The datum plane for most maps is mean or average sea level.

(2) *Elevation.* This is defined as the height (vertical distance) of an object above or below a datum plane.

(3) *Relief.* Relief is the representation of the shape and height of landforms and the characterization of the earth's surface.

The elevation of points and the relief of an area affect the movement and deployment of units by limiting the route along which they may travel. Also affected are observation, fields of fire, cover, concealment, and the selection of key terrain features.

ELEVATION, RELIEF, AND CONTOUR LINES

There are several ways of indicating elevation and relief on maps. The most common way is by contour lines. A contour line is a line representing an imaginary line on the ground along which all points are at the same elevation.

Contour lines indicate a vertical distance above or below a datum plane. Starting at sea level, normally the zero contour, each contour line represents an elevation above sea level. The vertical distance between adjacent contour lines is known as the contour interval and the amount of the contour interval is given in the marginal information. On most maps the contour lines are printed in brown. Starting at zero elevation, every fifth contour line is drawn with a heavier line. These are known as index contours, and someplace along each index contour the line is broken and its elevation is given. The contour lines falling between index contours are called intermediate contours. They are drawn with a finer line than the index contours and usually do not have their elevations given.

Using the contour lines on a map, the elevation of any point may be determined by—

(1) Finding the contour interval of a map from the marginal information, and noting both the amount and the unit of measure.

(2) Finding the numbered contour line (or another given elevation) nearest the point for which the elevation is being sought.

(3) Determining the direction of slope from the numbered contour line to the desired point.

(4) Counting the number of contour lines that must be crossed to go from the numbered line to the desired point and noting the direction—up or down; the number of lines crossed multiplied by the contour interval is the distance above or below the starting value.

If the desired point is on a contour line, its elevation is that of the contour.

For a point between contours, most military needs are satisfied by estimating the elevation to an accuracy of one-half the contour interval. All points less than one-fourth the distance between the lines are considered to be at the same elevation as the line. All points one-fourth to three-fourths the distance from the lower line are considered to be an elevation one-half contour interval above the lower line. If a more precise determination of elevation is needed, or if the contours are very widely spaced, the elevation of the point may be interpolated to the accuracy desired.

To estimate the elevation of the tip of an unmarked hill, add half the contour interval to the elevation of the highest contour line around the hill.

To estimate the elevation of the bottom of a depression, subtract half the contour interval from the value of the lowest contour around the depression.

In addition to the contour lines, bench marks and spot elevations are used to indicated points of known elevation on the map. Bench marks, the more accurate of the two, are symbolized by a black X, as X BM 124. The eleva-

tion value shown in black refers to the center of the X. Spot elevations shown in brown generally are located at road junctions, on hilltops and other prominent landforms. When the symbol designating an accurate horizontal control point is located at the same point, the symbol BM is used.

The spacing of the contour lines indicates the nature of the slope.

(1) Contour lines evenly spaced and wide apart indicate a uniform, gentle slope.

(2) Contour lines evenly spaced and close together indicate a uniform, steep slope. The closer the contour lines are to each other, the steeper the slope.

(3) Contour lines closely spaced at the top and widely spaced at the bottom indicate a concave slope. Considering relief only, an observer at the top of a concave slope can observe the entire slope and the terrain at the bottom.

(4) Contour lines widely spaced at the top and closely spaced at the bottom indicate a convex slope. An observer at the top of a convex slope has no observation of most of the slope or of the terrain at the bottom. The farther up the slope, the easier is the climb.

Knowing how to read contour lines will make certain terrain features almost jump out at you.

TERRAIN STUDY

Each of the following terrain features has a series of distinctive contour patterns.

(1) *Hill:* A point or small area of high ground. When you are located on a hilltop, the ground slopes down in all directions.

(2) *Valley:* A stream course which has at least a limited extent of reasonably level ground bordered on the sides by higher ground. The valley generally has maneuver room within its confines. Contours indicating a valley are U-shaped and tend to parallel a major stream before crossing. The more gradual the fall of a stream, the farther each contour parallels it. The curve of the contour crossing always points upstream.

(3) *Draw:* A less-developed stream course in which there is essentially no level ground and therefore, little or no maneuver room within its confines. The ground slopes upward on each side of ridges, at right angles to the valleys between them. Contours indicating a draw are V-shaped, with the point of the "V" toward the head of the draw.

(4) *Ridge:* A line of high ground with normally minor variations along its crest. The ridge is not simply a line of hills. All points of the ridge crest are appreciably higher than the ground on both sides of the ridge.

(5) *Spur:* A usually short, continuously sloping line of higher ground normally jutting out from the side of a ridge. A spur is often formed by two roughly parallel streams cutting draws down on the side of a ridge.

(6) *Saddle:* A dip or low point along the crest of a ridge. A saddle is not necessarily the lower ground between two hilltops; it may be simply a dip or break along an otherwise level ridge crest.

(7) *Depression:* A low point or sinkhole, surrounded on all sides by higher ground.

(8) *Cuts and fills:* Man-made features built for the bed of a road or railroad: This area is graded or leveled off by cutting through high areas and filling in low areas along the right-of-way.

(9) *Cliff:* When a slope is so steep that it connot be shown without the contours converging, it is shown by "tick" marks that always point toward lower ground.

MEASURING DISTANCE

Distances on a map can be measured because a map is a true picture of the land. The map tells you how much smaller a distance is than the actual ground, by means of a number found in the bottom margin about in the center. This number is called the scale.

The scale number may be shown in two ways, both having the same meaning. It may be written as a fraction (1/25,000), or it may be written as a ratio (1:25,000). In either case, it is the same as saying that one inch on the map is equal to 25,000 inches on the ground.

Distances on the ground are not usually given in inches. By the equivalents listed below, we can change into other units of measure.

Linear measure:

1 foot (') = 12 inches (")

1 yard = 3 feet = 36 inches.

1 statute mile = 1760 yards = 5280 feet = 63,360 inches.

1 meter = 39.37 inches = 1.098 yards.

1 kilometer = 1000 meters = .62 miles.

1 mile = 1.61 kilometers.

For example, let us divide 25,000 inches by 12, 36, and 39.37 and find out the number of feet, yards, and meters in the runway.

25,000 divided by 12 equals 2083 feet.

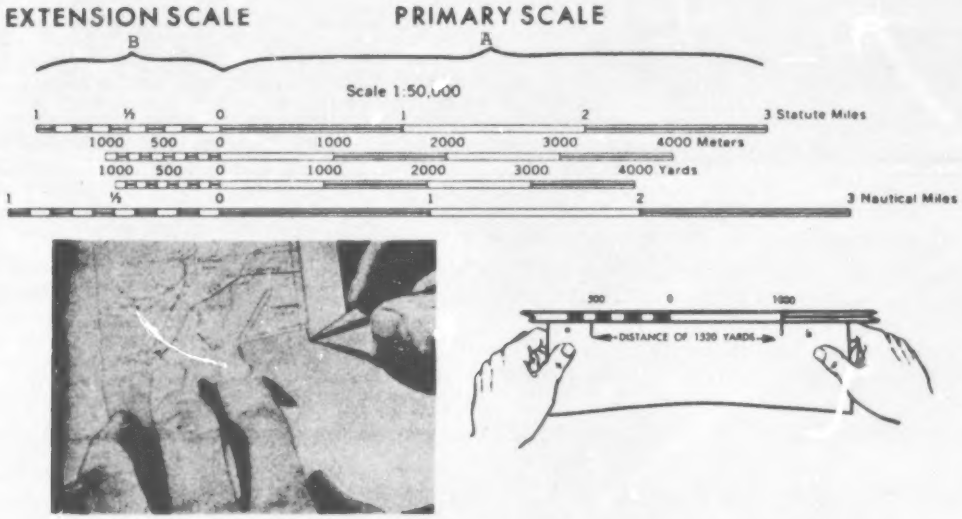
25,000 divided by 36 equals 694 yards.

25,000 divided by 39.37 equals 635 meters.

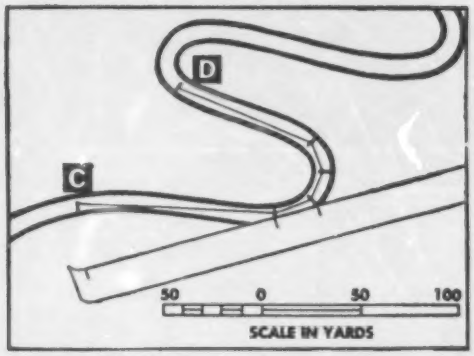
Another method for finding distances is by use of the graphic scale. This method is even easier to use than the one we have just discussed. Just below the notation of scale, 1:25,000, are located several objects which look like rulers. They are rulers, special kinds made just for that particular map.

This special ruler is called a graphic scale, and it is used with a map in the following manner:

A straight strip of paper is placed on the map alongside the airfield. We then place marks on the paper at both ends of the field. The paper is then placed



Measuring map distance with a scale.



Map distance measurements.

beside our graphic scale on the map which shows how long the field really is.

There is another thing to notice about this scale. It has two parts. From the zero mark to the right it reads in large numbers 500 yards apart (Part A). From the zero mark to the left it breaks down this large distance into smaller distances (Part B), 100 yards apart, so that we can measure more accurately.

For example, the marks on our strip of paper are further apart than the distance between the zero and the 500-yard mark on the graphic scale. If we place the right hand mark at the 500-yard point on the graphic scale, the left hand mark overlaps into the "B" part of the graphic scale. We see that is about at the second mark to the left of the zero, or at the 200-yard mark. By adding 200 yards to the first 500 yards we can say that the runway is about 700 yards long.

For purposes of allowing different units of measure to be used, three graphic scales are usually found on a map. These scales are usually measured in miles, yards, and meters. Refer again to the figure, imagining, this time, that it measures meters, instead of yards. The paper strip would be placed along the meter scale, with the right hand mark at the 500 meter point. The left hand mark would again overlap the "B" area. Add "B" to "A" and you have the total length of the field in meters.

In order to measure a curved or irregular line, divide a section between two points into small straight sections. Then we lay the edge of a strip of paper on the tick marks, one after the other, adding each section to what we already have marked. We finish with a straight piece of paper with the total length of the curved scale, in the same way as we measured the runway.

THE COMPASS

Earlier in this chapter you read about the azimuth and how it applies to basic map reading. Now, let us see how it applies to the use of the compass.

On the ground and on the map, the Marine Corps has an easy way to point out the direction of things. It is easy because the same idea is used wherever we are. The idea is simply this: We suppose that wherever we happen to be at any given moment we are in the center of a circle which has "avenues" running off in all directions.

The circle is marked off into 360 avenues. Each of the 360 spaces is called a degree and each avenue called an azimuth. This azimuth is just a name for a direction line; each of these direction lines has a number, depending upon which of the 360 avenues it is.

We can march off on one of these avenues, or azimuths, starting at the center of the circle. The avenues all start where you are, whether you are in a jungle, on a hill, or on a highway,

Azimuth.

just as with the man in the figure. The man has been told to go along the avenue marked "azimuth 60 degrees" (written as 60°), and he is pointing his finger at it. You can think of him in the center of the circle with 360 avenues or azimuths running out from the hub of a wheel. To make it easier to locate an avenue, every 10th avenue is numbered.

There are two important things to remember about the circle of avenues.

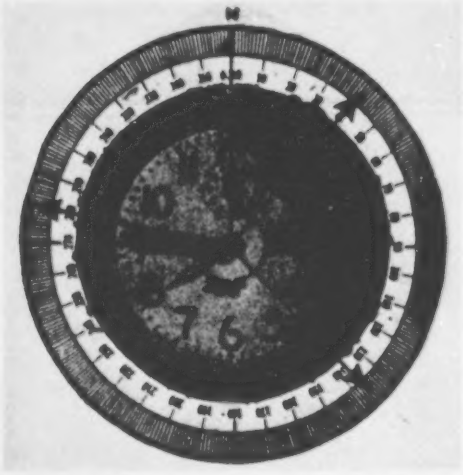
(1) The zero-0-avenue must always point NORTH. In a moment we will talk about how to find north, but right now, don't worry about it.

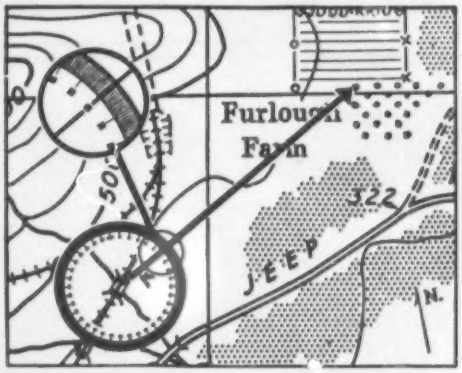
(2) The avenues are numbered CLOCKWISE. That means we number them in the direction that we number hours on a clock.

With this knowledge, let's put this circle to work for us. You are told that you are to meet a patrol at the base of a tree at Furlough Farm, and also told that if you crawl up the creek to where the railroad crosses it at the foot of the hill you can see the tree on an azimuth of exactly 60 degrees (60°).

From the map, you find where the railroad crosses the creek and go there. You remember that the center of the circle of the azimuths is right where you are. The first thing to do is to point the zero mark on the circle at the North. (You will learn later how to do this with your compass). Now it is easy to see which tree is on the avenue or azimuth marked 60° on the circle, using the azimuth system of direction.

When the time comes, you take off from your position and go to the tree. There, you meet the patrol, receive the information you are supposed to get, and walk back to the railroad where it crosses the creek. Now what azimuth did you walk back on? Was it 60°? No, it wasn't. If you face one direc-





Following an Azimuth.

tion you have a forward azimuth; if you face in the opposite direction you have a back azimuth. The back azimuth is on a straight line back through the center of the circle from the forward azimuth. If you are at the railroad, with the zero of the circle pointing north, the azimuth on the circle reads 240° from the tree to where the railroad crosses the creek.

The back azimuth of a line is its forward azimuth plus 180°, or if this sum is greater than 360°, the back azimuth is the forward azimuth minus 180°. For example, if the forward azimuth is 60°, the back azimuth is 60° + 180° = 240°. If the forward azimuth of a line is 310°, the back azimuth is 310° − 180° = 130°.

The back azimuth is an important thing to know about, because if you know how to use it, it will take you back to your starting point. For example, if you are sent on a mission at night to a point in strange country, your back azimuth will show you the direction in which you return.

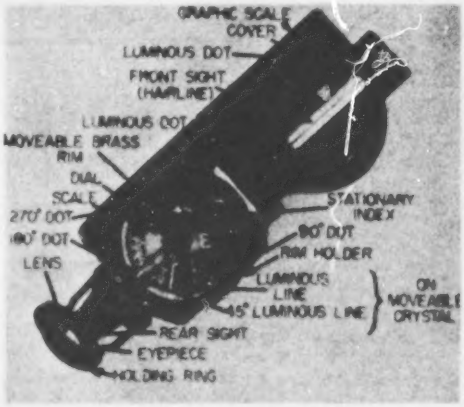
The Lensatic Compass. We come now to the compass, that useful instrument which finds north for us and finds our azimuth for us. The compass has on it the circle of numbered avenues or azimuths which we have been talking about in the last few pages. In other words, the compass is our direction-finding tool, and it has everything on it to help us find our way.

There are several types of compasses, but the one which we shall use here is called the lensatic compass. There are other kinds of compasses, but they all work on the same principle. If you understand how to use the lensatic compass, you will find it easy to learn to use the others.

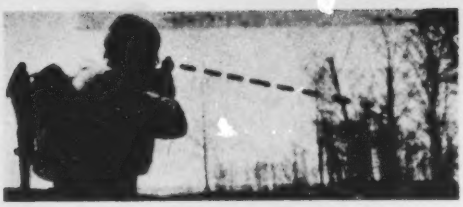
The most important thing about that compass is that no matter how you turn it, as long as you hold it level, the arrow always points in the direction of magnetic north. It won't let you down if you remember one thing: never use it near any metal object if you can help it. Metal objects will make the compass needle (arrow on this compass dial) point in the wrong direction. Whenever you use a compass, then, make sure you are well away from such metal objects as your helmet, rifle, truck, a wire fence, or any metal object which will bother your compass needle.

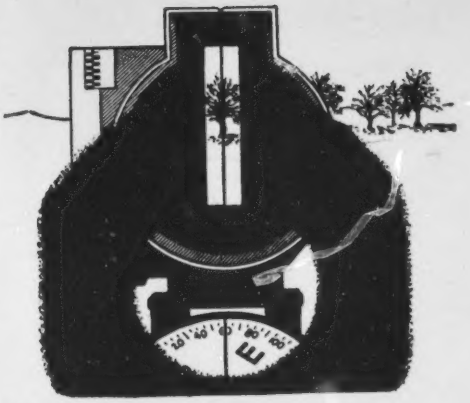
Back Azimuth.

Besides the compass needle which points north, there is another important part of the compass. That is the numbered circle of avenues or azimuths right on the face of the dial. Everything on the compass is designed to help you line up your compass with things on the ground and on your map to help you read the azimuth numbers.



Lensatic Compass.





Holding the Compass and Compass Sighting.

Compass Reading. Compass reading is easy, if it is done correctly. It is important to hold the compass correctly. Remember to point the compass in the general direction you want to go before you try to use it, and hold it level. Hold the compass so that it is steady. Notice that it is held with the eyepiece close to the eye. If you need to line up a tree, you look at the tree through the slit in the cover with the hair-line in it. The glass eyepiece is used only to read the azimuth numbers on the dial. It is there only so you will be able to glance down and read these numbers at the same time you line up an object with the compass. The Marine here has lined up the tree in his compass sights and he has found that the tree is on an azimuth of 60 degrees.

Finding The Back Azimuth. With a compass you can see how easy it is to find a back azimuth. You can do it two ways.

First read your back azimuth right off the dial by taking the number which is opposite the forward azimuth on a straight line through the center of the dial.

The second way is to sight from the point you have reached, back to the point you started from. The main difference between these two methods is that in the first you do not have to be able to see your starting point in order to get the back azimuth.

ALIGNING THE MAP WITH THE GROUND

Before the compass and the map are ready to be used together, the map must be placed in a position so that directions on the map are lined up with the directions on the ground. There are two ways to do this, one of them without the aid of a compass and the other with the help of a compass or of some other way of finding north. This act is called orienting the map.

By Inspection. The first method of lining up your map is called "by inspection", which simply means looking at the ground with the map in front of you. This can be done when you have found objects on the ground which you recognize on your map and which you can see.

For example, you may hold your map so that the crossroads on it line up with the crossroads on the ground in front of you. Your map is then oriented.

If the objects on the ground are not as simple as crossroads, you can still

Orienting the map by sight.

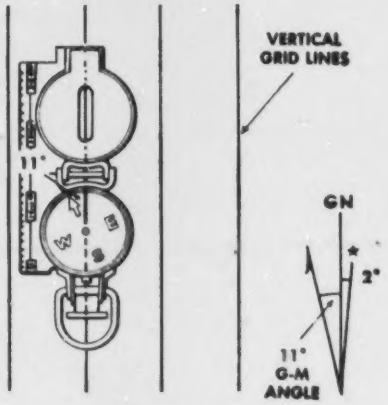
line up your map by inspection. You must know your approximate position on the map, then turn your map in front of you until the distant object (the tower) on the ground lines up with the same object on the map and with you position on the map. The dashed line in the figure illustrates this lining up process. Your map is then oriented.

By Compass. Another way to line up your map is by using the compass. The compass needle points to magnetic north. The difference between magnetic north, grid north, and true north, is shown on your map by a declination diagram.

The line with the half arrowhead represents magnetic north. The line marked "GN" is grid north, parallel to the vertical grid lines. (You have probably already noticed that maps are printed with north toward the top of the sheet.) The third line on the declination diagram represents true north and is marked with a star. The three lines are not always in the same position. The position of these three lines, in relation to each other, will vary on maps in different parts of the world.

The angle between grid north and magnetic north is called the G–M (grid-magnetic) angle. The numerical value of this angle is printed with the declination diagram. There are two ways to use this angle and a compass to orient your map with the ground.

To use the first method, you must draw the magnetic north line on your map. This is easily done with most



Orienting the map with a compass.

new maps where you find at the top margin a scale marked off in degrees and at the bottom margin a circle marked "P", called the pivot point. Read the number of degrees on the scale.

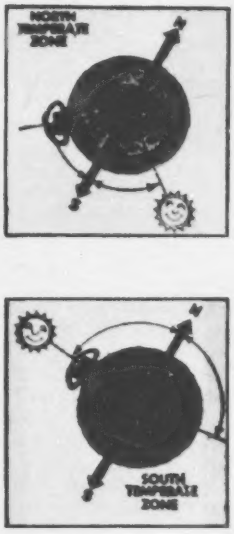
In the declination the magnetic north line is drawn to the 11° mark, the amount of the G-M angle on the declination diagram.

Before you use a map, ask your instructor to see that the magnetic north line you have drawn is correct. Do not try to draw the magnetic north line by extending the magnetic north prong on the declination diagram. The diagram may be exaggerated, especially if the angles are very small. Some maps have a caution printed beside the declination diagram:

"Use only to obtain numerical values."

With the magnetic north line drawn in, lay your map on a flat surface with top pointing in the general direction of north. Open your compass and place it on the map so the edge of the meter scale lines up with the magnetic north line. Turn the map until the compass needle lies under the stationary index. The map is then oriented.

If your map does not have a pivot point and scale or if it is folded so as to cover the magnetic north line, you can use the compass another way to orient the map with the ground. Lay your map on a flat surface as in the first method. Place the open compass so that the edge of the meter scale lies on top of a vertical grid line. Read the G-M angle on the declination diagram and note whether magnetic north is right or left of grid north. Turn the map until the compass needle points to the right or left of the stationary index by the amount of the G-M angle. If the declination diagram shows magnetic north right of grid north, then the map should be turned until the compass needle points right of the vertical grid line. The map in the illustration is oriented because the compass needle points 11° to the left of the grid line.



Finding North with a watch.

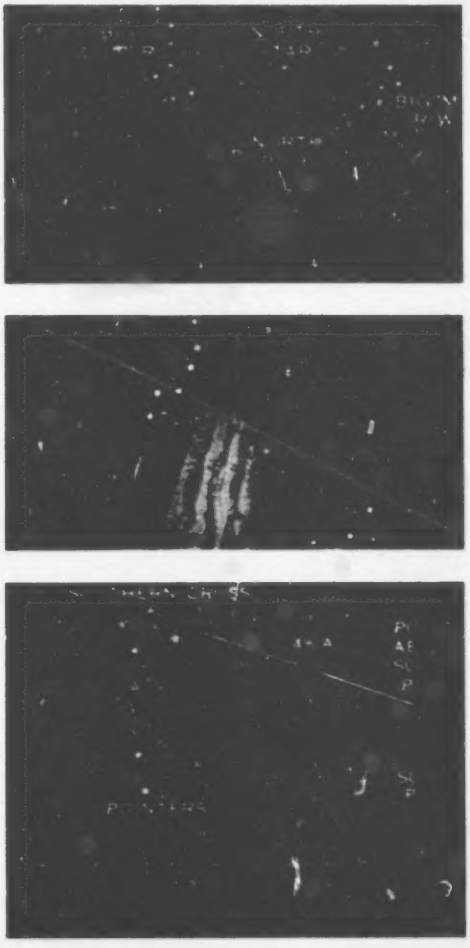
Without Compass. Even without a compass, however, you can orient your map with a north line. There are ways to find north without a compass.

1. By day in the North Temperate Zone, one way to find north is with an ordinary watch in good running order. Simply point the hour hand at the sun. Halfway between the hour hand and 12 o'clock is due south. Directly opposite from south is north, of course. The only tricky thing about this is that the watch should read sun, or standard time. If your watch is running one hour ahead of sun time (such as on daylight-saving time), use the 1 o'clock number instead of the 12 o'clock number.

2. By day in the South Temperate Zone, we use the watch, too, but a bit differently. In this case you point the 12 o'clock on the watch at the sun. Halfway between 12 o'clock and the hour hand is due north. Again, be sure it is standard time. If your watch is on daylight-saving time use the 1 o'clock

number on the watch instead of the 12 o'clock number.

3. At night in the Northern Hemisphere we find north without a compass by means of the stars. In the northern Hemisphere one way to use the stars is to find the Big Dipper. The Big Dipper is made up of seven fairly bright stars in the shape of a dipper with a long curved handle. If you can see the Big Dipper, use as pointers the two stars which form the side of the cup farthest from the handle. These point in the direction toward which you would pour from the dipper. These pointers aim at a bright star which is about five times the distance between the two stars of the Dipper cup. This bright star is the North Star, and is directly over the North Pole.



Direction by the Stars.

If you hold a finger away from your eyes so it just fits between the two pointers, and then, keeping your hand the same distance from your eyes, measure five fingerwidths from the end pointer, your farthest finger will just touch the North Star.

Sometimes, however, you cannot see the Big Dipper, although you may be able to see other stars. In that case we use a star pattern called the Big "W" or the Big "M". Notice that it is on the other side of and about the same distance from the North Star as the Big Dipper. The top of the "W" is open in the direction of the North Star. On a clear night you will always be able to see, in the northern hemisphere, either the Big Dipper or the Big "W". Sometimes you will be able to see both. In either case, you can find the North Star.

The Big Dipper and the Big "W" appear to rotate around the North Star during the night. Their position in relation to the North Star and to each other does not change.

4. Southern Hemisphere. In the Southern Hemisphere you can find true South by relation to the Southern Cross. Two bright pointer stars in the vicinity of the Southern Cross serve as locators to help pick out the right group of stars.

There are five stars in the Southern Cross. The outer four are fairly bright and form a cross. Imagine this cross as the frame of a kite. Put a straight tail on the kite four and one-half times as long as the length of the kite itself, using finger-widths for a measuring stock. The end of this tail will be close to a position directly over the South Pole. Usually you won't be able to see a star in that immediate vicinity because there

is not a bright star that can be seen directly above the South Pole.

There is another way to find the approximate location of the South Pole without measuring the four and one-half kite distance along the kite tail of the Southern Cross. Imagine a straight line perpendicular to the center line between the pointers. This perpendicular line intersects the extension of the Southern Cross kite tail. The point of intersection is approximately above the South Pole.

The Southern Cross and pointers appear to rotate about the South Pole during the night, just as the Big Dipper and Big "W" do in the northern sky.

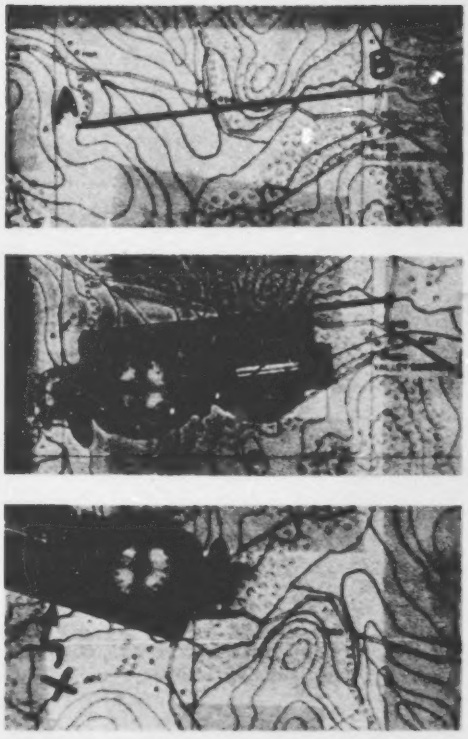
THE MAP AND COMPASS AT WORK

We know enough now about the compass and the map to start to use them together in a practical way.

Azimuth on the Map. We have learned how to find the azimuth of an objective on the ground by sighting with the compass. Now we come to the problem of learning to find the azimuth of something on a map.

For example, how do you find what the azimuth is from the house (point A) to the bridge (point B) on the map showing Green Valley School? First you draw a line lightly on your map between the house and the bridge. Next, you orient your map using the magnetic line and your compass as explained earlier in the chapter. Then lay your compass on the map so that the edge of the graphic scale and the pencil line coincide. You read the azimuth 84° on the compass and you have your answer.

Suppose that you wanted to show on the map that a machine gun was on the path at an azimuth of 105° from the bridge. To find the correct point on the map, you would proceed as follows: First orient your map; then lay your compass so that the "0" indicator on the graphic scale is directly over the bridge. Pivot the compass, keeping the "0" indicator at the bridge, until the stationary index lines up with 105° on the dial. Draw a line along the edge of the graphic scale from the bridge until it crosses the path. The machine gun is located where the line crosses the path ("X" in the picture).

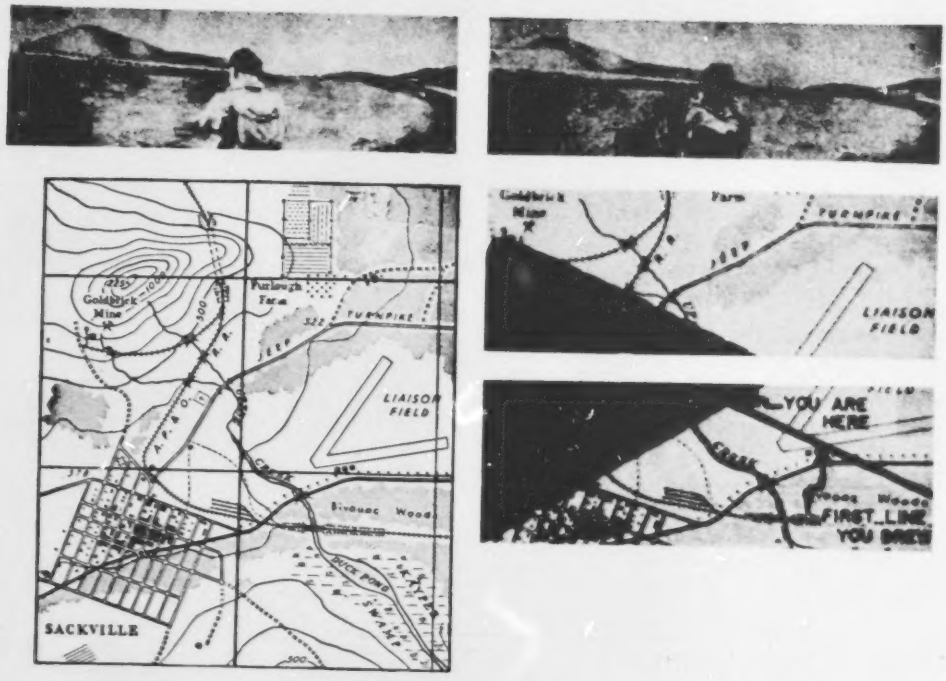


Azimuth on the map.

Finding Your Location. Many times you will need to know accurately your location on a map. If your location is somewhere between the airfield and the creek on the Sackville map, to find your exact location:

1. Orient your map with a compass.

2. Find two things on the ground



Finding Your Location.

in front of you which you can also find on your map.

3. With your compass, take an azimuth on a point, for example, the building at the mine. Sight through the compass, line up the building with the hairline in the compass, and read the azimuth through the glass eyepiece (305°).

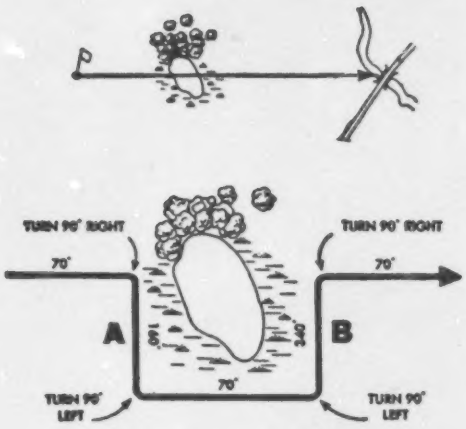
4. Find the back azimuth by subtracting 180° from 305°. (305° − 180° = 125°).

5. Lay your compass on your map, with the "0" indicator on the graphic scale directly over the building at the mine. Then pivot the compass slowly until 125° on the dial lines up with the stationary index. Draw a line along the edge of the graphic scale.

6. You are somewhere along this line on your map, but you still need to know exactly where. Repeat the procedure with a second pivot, for example the tip of the left-hand runway of the airfield. A forward azimuth reading shows it to be 67°. Lay the "0" indicator of the graphic scale directly over the tip of the runway on your oriented map, line up the stationary index with 247° (67° + 180° = 247°), draw your line along the graphic scale until it crosses the first line you drew. These two lines cross at your exact location.

Finding An Objective. Suppose you are somewhere southeast of Sackville and your platoon leader tells you to go to a certain bridge. He points out the bridge on the map and draws a line on the map from your position to the bridge. By laying your compass on the oriented map you find that the bridge is on an azimuth of 51° from where you are. Your job is to get to the bridge. That means that you must march along that azimuth.

First you take your compass, sight on



Detouring around an obstacle.

an azimuth of 51°, and discover that you cannot see the bridge at all from where you are. You know, however, that it is somewhere up there ahead, along that line on which you are sighting. You can see the edge of the woods on your line of sight. So you head for the edge of the woods, and when you get there you find the bridge in front of you.

If it so happened that you could not see the bridge from the edge of the woods, you would do the same thing again, picking out a tree, fence, or other object along your line of march, until you finally reached a point where you could see the bridge.

We cannot always march in a straight line because we may encounter obstacles such as a pond. The method for detouring around an obstacle is shown in the picture. A very important rule to remember is that when you make a right turn, you add the number of degrees in the turn to your azimuth. When you make a left turn, you substract the number degrees in the turn from your azimuth.

You begin your march on an azimuth of 70°. After making a 90° right turn you are marching on an azimuth of 160°, (70° + 90° = 160°).

You count your paces as you march along line "A", because you must march the same distance on line "B" to arrive back on your original line of march. When you have gone far enough along line "A" to clear the pond, you make a 90° left turn and you are again marching on an azimuth of 340°, (70° − 90° = −20°). We do not use negative azimuths in the Marine Corps, so you must subtract your negative azimuth from the total degrees in a circle to obtain the correct azimuth; 360° − 2° = 340°). You now march on line "B" the same number of paces you marched on line "A", and when you make a 90° right turn, you are on your original line of march on an azimuth of 70°.

THE PROTRACTOR

Protractors come in several forms—full circle, half circle, square, and rectangular; all of them divide a circle into units of angular measure, and regardless of shape, consist of a scale around the outer edge and an index mark. The index mark is the center of the protractor circle from which all the direction lines radiate.

To determine the grid azimuth of a line from one point to another on the map (from A to B or C to D):

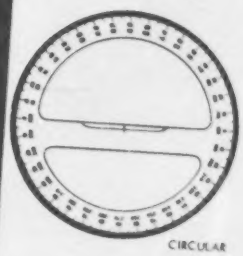
(1) Draw a line connecting the two points.

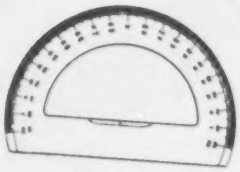
(2) Place the index of the protractor at the point where the line crosses a vertical (north-south grid line).

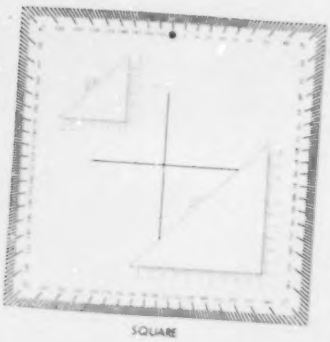
(3) Keeping the index at this point, align the 0°-180° line of the protractor on the vertical grid line.

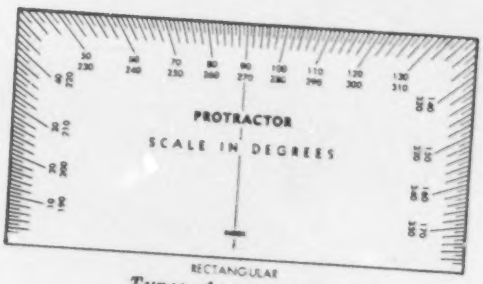
(4) Read the value of the angle from the scale; this is the grid azimuth of the point.

To plot a direction line from a known point on a map:

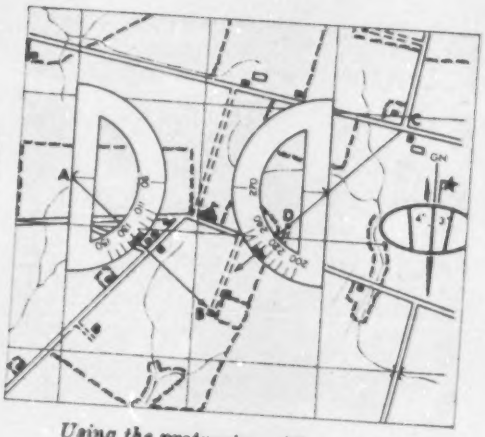




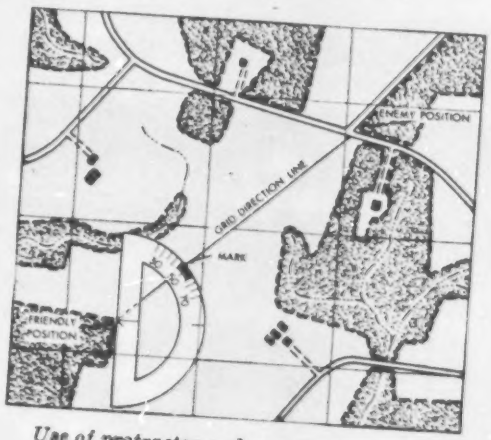




Types of protractors.



Using the protractor with a map.



Use of protractor and map for direction.

(1) Convert, if necessary, the direction to a grid azimuth.

(2) Construct a north-south grid line through the known point.

(a) Approximately align the 0°–180° line of the protractor in a north-south direction through the known point.

(b) Holding the 0°–180° line of the protractor on the known point, slide the protractor in the north-south direction until the horizontal line of the protractor (connecting the protractor index and the 90° tick mark) is alined on an east-west grid line.

(c) Draw a line connecting 0°, the known point, and 180°.

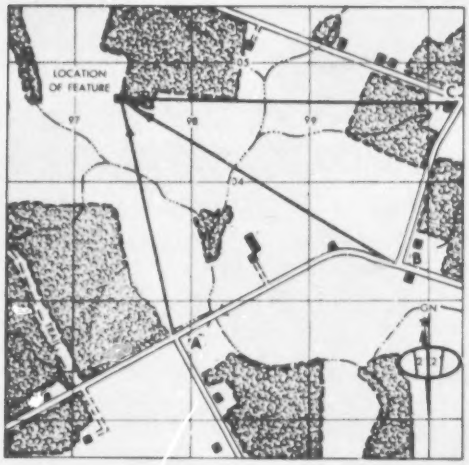
(3) Holding the 0°–180° line coincident with this line, slide the protractor index to the known point.

(4) Make a mark on the map at the required angle.

(5) Draw a line from the known point through the mark made on the map. This is the grid direction line.

INTERSECTION

The location of an unknown point by successively occupying at least two but preferably three known positions and sighting on the unknown point is called intersection. It is used to locate fea-



Intersection by map and compass.

Intersection by straightedge.

tures that are not defined on the map or which are not readily identifiable. The two methods of intersection are the map and compass method and the straightedge method.

a. Map and Compass Method.

(1) Orient the map using the compass.

(2) Locate and mark your position on the map.

(3) Measure the magnetic azimuth to the unknown position; convert to grid azimuth.

(4) Draw a line on the map from your position on this grid azimuth.

(5) Move to a second known position from which the unknown point is visible. Locate this position on the map and again orient the map using the compass.

(6) Repeat (3) and (4) above.

(7) As a check on accuracy, move to a third position and repeat (1) through (4) above.

(8) Where the lines cross is the location of the unknown position. Using three lines a triangle is sometimes formed instead of an intersection. This is called the triangle of error. If the triangle is large, recheck your work to find the error. Do not assume that the position is at the center of the triangle.

b. Straightedge Method (When No Compass Is Available).

(1) Orient the map surface by the inspection method.

(2) Locate and mark your position on the map.

(3) Lay a straightedge on the map with one end at user's position (A) as a pivot point and rotate the straightedge until the unknown point is sighted along the edge.

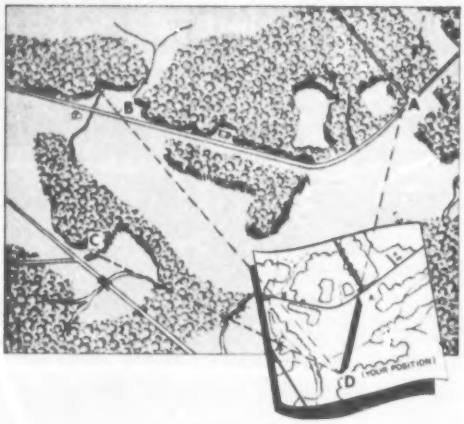
(4) Draw a line along the straightedge.

(5) Repeat the above procedures at position (B) and for a check on accuracy, at a third position.

(6) The intersection of the lines is the location of the unknown point (C).

RESECTION

The location of the user's unknown position by sighting on two or three known features is called resection. Resection can be done with or without a compass.



Resection.

a. Map and Compass Method.

(1) Orient the map using the compass.

(2) Locate two or three known positions on the ground and mark them on the map.

(3) Measure the magnetic azimuth to a known position; convert to grid azimuth.

(4) Change the grid azimuth to a back azimuth and draw a line on the map from the known position back toward your unknown position.

(5) Repeat (3) and (4) above for a second known position.

(6) For a check on your accuracy, repeat (3) and (4) above for a third known position.

(7) The intersection of the lines is your location. Using three lines, a triangle of error may be formed. If the triangle is large, recheck your work.

b. Straightedge Method (When no compass is available).

(1) Orient the map on a flat surface by the inspection method.

(2) Locate two or three known positions on the ground and mark them on the map.

(3) Lay a straightedge on the map with the center of the straightedge at a known position as a pilot point and rotate the straightedge until the known position on the map is aligned with the known position on the ground.

(4) Draw a line along the straightedge away from the known position on the ground toward your position.

(5) Repeat (3) above using a second known position and as a check on your accuracy repeat (3) above using a third known position. The intersection of the lines is your location.

AERIAL PHOTOGRAPHS AND PHOTOMAPS

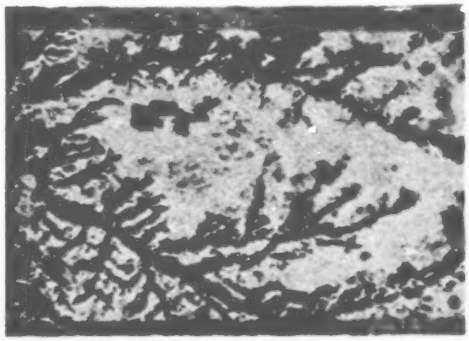
The map you have learned to use is a topographic map, with the ground features drawn to scale. Another kind of map, and one you are likely to see often, is a photomap, made by photographing the ground from an airplane. Your photomap may be a single aerial photograph, or several put together to represent a larger area. It will have on its margin various items of information, the most important of which are the arrow indicating magnetic north and the scale. The photomap may have a grid on it. If it has, you use it as you use the grid on a topographic map.

In some ways photomaps are not as easy to use as drawn maps. They do not indicate elevations clearly, because they do not have contour lines. Roads enter a wood, disappear beneath the trees, and reappear going in a different direction. On the other hand, the information on photomaps is more likely to be up-to-date. Probably your photomap was made from pictures taken only a few days ago. If it shows a wood or a road, you know it is there, while a wood shown on a topographic map may have been cut down after the map was made, or a new road may have been built.

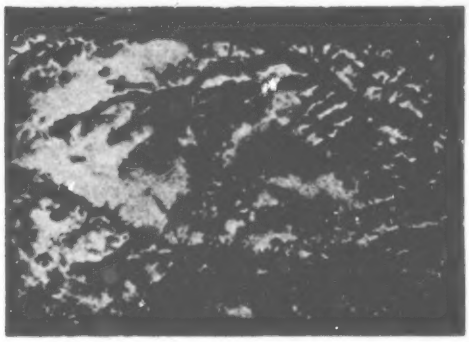
Topomap and Photomap.

A figure accompanying this topic is a map of Sackville, half as a topographic map and half as a photomap. Although the two parts of the map appear very different, you can easily follow the roads, the railroad, and the creek.

How to Read a Photomap. To read a photomap or an aerial photograph, hold the photograph so that the shadows of objects fall toward you. The figures shown demonstrate what happens when you hold an aerial photograph the wrong way and when it is viewed correctly, so that the shadows fall toward you. In the first picture you see deep stream lines, but in the second, correct picture



Photomap—shadows away from viewer.



Photomap—shadows toward viewer.

the streams have become ridges. Remember, there is only one correct way to look at an aerial photograph, and that is with the shadows falling toward you.

Tone and Color. One of the qualities which help to identify things on a photomap is tone. This means shades of gray formed by comparative roughness or smoothness of surfaces. Rough surfaces, such as woods and brush, look dark. Tall grass looks darker than close-clipped grass. Smooth surfaces, such as concrete roads, look light.

Color has some effect too. Thus, roof painted white or some light color looks light, while a black or dark-colored roof may look dark, though both roofs may be smooth. Things that look dark or light to your eye look pretty much the same on a photomap.

Shape and Shadow. The shape of an object helps tell you what it is. A wood is irregular in shape; an orchard is regular, though both have trees. Roads and railroads both are long and narrow, but roads curve more sharply than railroads and have other roads joining them at right angles.

The shadow of an object usually is a helpful telltale. Looking straight down from a plane the camera makes the top of a silo and the top of a water tower look alike; but the silo's shadow is a solid patch running away from its base, while the tank's shadow is a dark patch some distance away, per-

haps with the shadows of its supports also showing.

Shadows may tell you how high an object is. For example, if you compare the length of a steeple's shadow with that of a telephone pole, you have some idea how high the steeple is.

Shadows are especially useful for informational purposes because an object may be camouflaged without hiding its shadow.

Size and Relation. Often you can identify an object by its relative size, for instance, a chicken house from a barn or an irrigation ditch from a canal. The width of a road may be judged by comparing it with the width of vehicles on it.

Other Clues. Other objects may be recognized by their general appearance on photographic maps:

1. Any light patch in a darker area may be freshly-turned earth, trench, or a foxhole (that is why you conceal the fresh earth of your foxhole).

2. A small cluster of buildings may be a farm or a small village. If the buildings are of fairly uniform size and lie on both sides of a road it is probably a village. If they are mixed size, and most of them are on one side of the road, it is likely to be a farm.

3. A hedge may look like a brush-grown fence, but it will have a more uniform width from being trimmed.

4. Military objects and activities in an area may be identified in aerial photographs from the shape and layout of the objects and from their shadows and tracks.

5. When four track patterns are visible on an aerial photograph, it may mean artillery, if the area is suited for artillery positions, because field artillery is usually employed in groups of four or six guns.

6. Growing crops appear in roughly rectangular patches of different shades of light and dark, with the edges sharply marked. This is the kind of pattern you often find in European or North American countryside.

7. Different kinds of trees and woods can be detected in an aerial photograph. Note the aerial view of typical jungle terrain such as is found in portions of the South Pacific.

The picture with numbered locations shows a number of objects and forms in an aerial photograph. These are identified as follows:

(1) Plowed field.

(2) Bridge. Another bridge in just below it. Note shadow of its spans on the water.

(3) Railroad.

(4) Crossing of large highway and country road. Roads are usually light-toned and even in width.

(5) Building. It is hard to see without a magnifying glass, but you can see its shadow.

(6) Neck of woods, bordering on a meadow. The denser the woods, the darker they appear on the photograph.

(7) Footpath crossing the meadow. You can tell it from a road, because it is so much narrower than the light-colored lines which are roads.

(8) Orchard, with evenly spaced trees.

Jungle from the air.

A typical aerial photo scene.

(9) Mud flat. A mud flat usually is darker than the water and has light spots caused by pools of standing water.

(10) Small stream, identified by its meandering course. When a small stream flows through a wood, you can tell it is there, even though you cannot see it, by the wavy line of heavier vegetation along it.

(11) Brick factory. Spoked, round buildings are kilns.

(12) Fence line. Usually the texture of the ground on two sides of a fence is different, so one side is lighter than the other. Also, a fence line is darker than the space around it, because brush grows close to it.

(13) Village. You can see several of its streets.

Grid Coordinates. It was explained at the beginning of this chapter that your photomap may have a grid and marginal information printed on it such as you have learned to use on a topographic map. If the photomap does have such a grid, you use the same system to describe grid coordinates as with a topographic map.

Sometimes you may be given an aerial photograph with a grid marked differently. These grid lines are marked with letters instead of numbers. To locate an object with this type grid, you first identify the square it is in by giving the letters of the lines crossing at the lower left corner of the square. You give the letter of the vertical line first, then the letter of the horizontal line. To locate a point within a square, you mentally divide the square into tenths. Now, just as you learned before, count the number of tenths the point is from the left grid line of the square. Then count the number of tenths it is above the bottom grid line of the square.

There are two important things to remember about grids on aerial photographs. First, north is not always toward the top of the photograph. Second, the grid is for locating points, not for measuring distances. The ground distance between grid lines won't be exactly the same in different squares of the photograph because of distortions in aerial photographs.

To Orient An Aerial Photograph. If you have a topographic map of the same area, turn your photograph until roads and other features on it lie exactly parallel to those on the map; then draw a north arrow parallel to the one on the map.

If you have no topographic map, orient your photograph by turning it until its roads parallel those found on the ground. Then lay your compass on it and draw a line in the direction your

compass needle points. That is your magnetic north line.

In this chapter you have been given a great deal of information regarding a single sheet of paper, a map. Some of this information has been simple and straightforward, and some of it has been quite involved. In any case, it has provided you with tools that you can use not only in a military environment, but in recreational pursuits as well. All you have to do is master a few of the basics, and you can find your way anywhere in the world.

PASS IN REVIEW

By definition a leader is one who goes in front; obviously, then, the leader must know where he is going. In cases where the job to be done is far from the interstate highway, it becomes essential that the leader knows how to use the basic tools of land navigation—the map and compass. Not only must you be able to get from place to place, but further, you must be able to "see" the terrain along the route to be traveled in order that you might plan the trip. Rivers to be crossed and mountains to be climbed present no real obstacles to a group which is properly equipped, but that prepared group needs a leader who can equip himself with the information necessary to plan the trip.

a. List the primary types of information given in the margin of a map.

b. What are the basic colors used on a map—what do they indicate?

c. Why is some form of grid system needed on a map?

d. Explain the relationship between true, magnetic, and grid directions.

e. Discuss the importance of contour lines.

f. How do metal objects affect a compass—why?

g. What must be done to orient a map?

h. Discuss the procedure for using map and compass together.

i. How do topographic and photographic maps differ?

CHAPTER 15

ORIENTEERING

WHAT IS ORIENTEERING?

Orienteering is a combination of cross-country running and land navigation. With the aid of map and compass, the orienteer aims to finds his way to the finish line as quickly as possible over a course which is unfamiliar to him. He must "Pioneer" the trail, relying on his own knowledge, skill, and courage as he moves from control marker to control marker. The runner competes against time nature, and invisible opponents. Gordon Pirie, a former long distance runner from England, has this to say about the sport, "You are alone, depending on your own decisions and needing the courage of your convictions in situations of stress and excitement when the mind is dulled by fatigue."

Orienteering is an ideal way to learn to use the map and compass. Novice Orienteers find that map reading is an easily acquired skill which is fun to learn. It also promotes physical fitness, but fitness is not the lone requirement for competitive Orienteering. Factors of judgement, skill and a cool head tend to equalize the competition. The champion orienteer must be master of many qualities:

(1) Physical fitness and determination.

(2) Skill with map and compass.

(3) Mental alertness and decisiveness.

Orienteering is an exciting, stimulating sport which absorbs mind and body. It can be enjoyed by all ages at their own pace, and requires a minimum of equipment. The natural wilderness setting adds to the relaxed, informal atmosphere of the sport.

ORIGIN AND GROWTH OF ORIENTEERING

Orienteering began as a part of military training in Scandinavia in the late 1800's, but there were few competitive events until some years later. In 1919 Major Ernst Killander, who was president of the Amateur Athletic Association in Stockholm, Sweden, adapted this military event to stimulate interest in track and field for the youth of Sweden. The first competition in this modern version of Orienteering was held near Stockholm on March 25, 1919. There were 220 participants in this first event, and the contestants were enthusiastic about this new sport which combined physical exertion with the mental gymnastics of determining how to move quickly and safely from one place to another over all kinds of terrain.

The sport grew rapidly in Sweden in the 1920's and soon spread to Norway and Finland. In 1933 three noted Swedish orienteers developed a new type of compass for Orienteering. This new compass, the SILVA compass, was more precise and easier to use than others in use at that time. The men responsible for this new aid to orienteering were the brothers Bjorn and Alvan Kjellstrom and their friend, Gunnar Tillander. This trio was among the best Orienteers in Sweden during the 1930's, but they are more famous for introducing through the SILVA compass a new and simplified system for teaching land navigation. Soon, youths eight years of age and younger were learning map and compass techniques and taking part in Orienteering games. These young orienteers provided the interest that sustained the rapid growth of the sport all over Scandinavia. The first official Swedish championships were held in 1935, and the Swedish Orienteering Association was organized in 1938. Norway held its first championship event in 1937, and Denmark followed with one in 1940. An orienteering demonstration event was planned for the Olympic Games in Helsinki in 1940, but the outbreak of World War II caused the Games to be cancelled.

After the war, Orienteering in different varieties was introduced into other European countries by immigrants from Scandinavia who wanted to remain active in the stimulating sport they had learned in their home land. The sport became especially popular in Switzerland, and there were meets between Swiss and Swedish Orienteering clubs as early as 1950. The first major international competition was held by Swedish Orienteering Association in May, 1959, with eleven nations represented. In 1961 the International Orienteering Federation was formed at a meeting in Copenhagen, Denmark, and since then the IOF has been actively promoting and encouraging the sport.

The sport made its way to Great Britain by way of Scotland in the early 1960's, and after a slow start it has become one of the most popular individual sports in the United Kingdom, with several hundred active clubs. The sport has attracted many Olympians and U.K. champions such as John Disley and Roger Bannister, and today the British teams offer keen competition in international meets.

ORIENTEERING IN THE USA

Orienteering was brought to the United States in 1946. Bjorn Kjellstrom, the former Swedish Orienteering Champion, introduced the sport to some Boy Scout leaders in Indiana, and the first organized meet was held on November 24th at the Indiana Dunes State Park. Two small boys won the meet, not by speed or strength, but by superior work with their map and compass. Early growth in the sport in this country was slow, however, because of a scarcity of knowledgeable organizers or sponsoring groups.

In 1948, Kjellstrom introduced the sport to Canada and caught the interest of Professor Alex "Sass" Peepre who taught physical education at Guelph University in Ontario. Peepre's enthusiasm stimulated the growth of Orienteering in Canada, and led indirectly to its first scrutiny by the U. S. Marine Corps. In 1967, an officer from the Marine Corps Physical Fitness Academy at Quantico, Virginia, attended a meet organized by Professor Peepre in Guelph, Ontario. The Marine officer was enticed to enter an event at Guelph and was surprised to discover that young children, boys and girls, could negotiate rough terrain faster than he, a Marine Corps Infantry officer. Upon his return to Quantico, Orienteering was inserted into the curriculum at the Physical Fitness Academy.

The sport which had languished in America since its introduction in 1946 had won an energetic and enthusiastic sponsor. The officers and men at the Marine Corps Physical Fitness Academy recognized the value of Orientering as a part of military training and endorsed it wholeheartedly. This interest soon spread to other Marine Bases and U. S. Army Commands throughout the country. The competitive spirit of these services led to the first interservice Orienteering Championship at Quantico, Virginia, on 12 September 1969. From this meet four Marines and three Soldiers were selected to participate in the Council International du Sport Militaire Orienteering Championship in Switzerland on 3 October 1969. The United States Armed Forces team finished last out of eight nations participating, but the American servicemen were proud of the respectable times they turned in against world champions whose countries had been participating in Orienteering for fifty years.

As a result of this stimulus by the Marines and U. S. Army, enthusiasts spread the word over hill and dale across the country, and the first U. S. Open Orienteering Championship Meet was held at Carbondale, Illinois, in October 1970. This meet attracted both civilian and military competitors.

In addition to the active programs of Orienteering in the Army and Marine Corps, the United States Military Academy at West Point includes Orienteering as an intramural sport among the cadets and uses it to teach land navigation. Other U. S. universities are now offering Orienteering as an elective in their physical education programs, and many Orienteering clubs are being formed at high schools across the nation.

ORIENTEERING AROUND THE WORLD

New Zealand, Australia, Bulgaria, and Japan are beginning to take an active part in the sport, and it has been noted that once the sport takes root in a country its popularity grows very rapidly. Is there any other sport that can boast of 7,000 participants in one competitive event—such as the five-

day Orienteering meet in Skane, Sweden, in 1970? Ski Orienteering has been approved as an event in the Nordic ski competition in the Winter Olympics, but has never been on the Olympic program so far. The International Orienteering Federation is working to have the event included at the Winter Olympics in Colorado in 1976. The IOF also worked to have an Orienteering demonstration at the Olympic Games in 1972 at Munich.

TYPES OF ORIENTEERING

Orienteering may be presented in many forms. However there are two major types—cross-country orienteering and score orienteering. Other types are line orienteering, relay orienteering, and night orienteering. The ultimate form is cross-country orienteering, as used in international competitions. Varations in the types listed are left to the imagination of the organizer.

CROSS COUNTRY ORIENTEERING

Cross-country orienteering is the most common form of competitive orienteering. Every competitor must visit the same controls in the same order, therefore it is a direct challenge in route choosing and sheer stamina. Usually there are from eight to twelve controls situated in varying degrees of difficulty and over courses of different lengths, depending on the level of competition. Each control is ringed in red ink on the master map and the order in which it is to be visited is also clearly marked. Sometimes the finish is at the same place as the start, but this in not essential. All the controls must be clearly described on the description sheet.

SCORE ORIENTEERING

The area chosen for this type of competition is dotted with a large number of control points (up to fifteen or twenty is usual), care being taken to ensure that there are more controls sited than can possibly be visited by any one person or team in the allotted time. The near controls carry a low point value, e.g. five points, while those at a greater distance and more difficult to find carry correspondingly higher point values up to twenty points as a general rule. There are a number of ways in which the competition can be run. Pair work is a method by which teams of four to six members can work in pairs, and it is up to the leader to decide which members of the team should be sent to find the difficult controls, and which members should be sent to find the easier ones. Another method is to work in singles as in cross-country orienteering. The competitor must decide for himself the strategy to use in order to gather as many points as possible in the allotted time. One method is to work one's way out to the high point controls as rapidly as possible, perhaps picking up a few low value controls in the process and picking a route in which a few more lower point controls can be picked up on the return. Some form of penalty system must be devised to take into account those team members or individuals who exceed the allotted time. For example, deduct five points for every minute late.

LINE ORIENTEERING

This form of orienteering is staged in much the same way as cross-country orienteering in terms of master maps, starting intervals, etc., but there is one major difference: No controls are

marked on the map, only the route. The competitor transcribes this line to his map, then seeks to follow it as carefully as possible over the terrain. At various points along this line, hidden controls are sited, the location of which are known only to the organizer. The competitor will only find a control by following the line. As in cross-country orienteering the fastest man around the course is the winner. A penalty of ten to fifteen minutes is given for each missed control. Also, an interval of three to five minutes should be given competitors to prevent one from following the other.

RELAY ORIENTEERING

This is the most popular team competition. The number of legs in the relay depends on the number of men in a team. All the rules and regulations concerning cross-country orienteering apply to relay orienteering except that a competitor may run only one leg. The first man of the team away will run to the master map to find only the three controls of his own leg marked on the map. The degree of difficulty depends on the level of competition. The first runner will be given a "baton" (for example an identity disc to hang around his neck by a cord) which he must pass to the next runner in the team when he has completed his leg. The map may act as the baton. The simplest way for the organizer to arrange the course is in a clover leaf pattern. Each leg begins from a common start area and master map area.

NIGHT ORIENTEERING

This type of competition, whether based on a score event or cross-country event, demands a high degree of skill in judging distances and compass work. The courses are set in daylight over much easier terrain, with a shorter distance between controls. The controls are marked by a small red lamp, with a stamp attached to it. In civilian competitions (Europe and Scandinavia), competitors wear lamps strapped by a harness to their foreheads, similar to a miner's lamp. This may be rejected by military organizers as the use of a head lamp distracts from the military aspect of map reading. Most military orienteers use a small flashlight. A plastic penlight is ideal because the plastic does not affect the compass.

SETTING A COURSE

The aim of the course setter is to make a competition which gives a fair result based upon the competitors' orienteering ability. Therefore every course setter has two main aims:

1. To organize a fair and sporting race.
2. To ensure that the individual character of the orienteering running is maintained.

SPORTING QUALITIES

The course setter must strive to produce in every detail a course which will make equal demands upon the orienteering ability of each and every competitor. Chance must play no part in the results of the competition. An accurate map and well selected controls are essential if the event is to be a fair test of the skills of the competitors.

1. *The Map.* An accurate map is the first consideration in setting a fair course for all competitors. The map must be a mirror of the actual terrain to which it refers. The runner's progress across the terrain relies entirely

upon his map reading. Since his choice of route depends upon the accuracy of the map—the map's "mirroring" the terrain—the fairness of the event depends upon the quality of the map. Without a good map it is not possible to set a fair competition in which all competitors will have an equal chance to win. Any inaccuracy may impede one runner who happens to choose his route passing through areas not correctly charted, whereas another competitor, having chosen a different route across an accurately charted area on the map, will have an unfair advantage.

2. *The Controls.*

a. Setting. Each control point must be sited at the exact location on the terrain as indicated by the map.

b. Control vicinity. The terrain in the close vicinity of the control point must be exactly as shown on the map.

c. Control approaches. The main features on the approaches to the control which competitors will be likely to use as "stepping stones" to start their final run to the control, must all be accurate in their distance and direction from the control point.

d. Control difficulty. The control difficulty must be selected to match the standard of the competition.

e. Control definition. The actual control point must be as described in the control definition.

3. *Placing the Control Marker.* The flag must mark the exact point of the control as marked on the map at the very center point of the control circle which is used to indicate the control point on the map. On the other hand, if one must run on a compass bearing to a small feature on the terrain which will not entail map reading at all, then the flag must be placed at a height relative to the distance covered on the compass bearing. That is, a short distance would warrant the low placing of the flag, while a long distance justifies a high placing of the flag. This particular rule will also be modified in accordance with the quality of the "catching" front of the control point. For example, if the control point is sited on a strong feature, then the flag will be placed lower than if the feature is a very minor one. The flag must be placed in such a way as to avoid open terrain which would cause competitors who have found the control to give its position away to other competitors who have not yet found the flag.

4. *Route Choices.* A course which offers the choice of several alternative routes between control points will spread the competitors throughout the terrain and ensure that individuals rely on their own orienteering skills. The competitor's freedom of choice of route, the greatest quality of the sport of orienteering, must in no circumstances result in an element of good or bad luck having a decisive influence on the result. Any element of chance must be eliminated.

Choosing the best route must never involve such a terribly complicated choice between the alternative routes available which cannot be reasoned out by a clever orienteer. Every choice of route which the map indicates as feasible must also be feasible in practice over the terrain. A chosen route must not in practice turn out to be easier and faster than indicated by the map picture; for example, a path which is not shown on the map but is now on the terrain. Alternatively, a chosen route must not be harder in practice than indicated by the map picture for example, a flooded area or difficult rocks not shown on the map. The choice of route must not allow any element of luck to enter into the result of the orienteering race.

5. *Course Layout.* Each leg of the course must be carefully planned and adjusted relative to the other legs so that the course as a whole will not allow luck to enter into the running of the competition. Controls must be so situated as to eliminate the situation of runners going to a control being led into the control flag by those runners who have found the flag and are leaving the control point. This does occur when "dog-legs" exist on a course, i.e., when the incoming and outgoing routes are in an acute angle to each other, offering a common route to and from a control.

When a course shows legs which cross each other, or when the course is such that the competitors may, by different route choices, cause the same terrain to be crossed, the course must be shown to all competitors before the start. This will enable all to make their own route choices in advance of the competition start.

RUNNING THE COURSE

To make a sporting competition the course setter's second aim is to set a course which poses problems to the runners which will guarantee individuality of the orienteering running.

1. *Orienteering and Running.* The individual nature of the orienteering skill and that of running are to be equally apportioned and both must exist throughout the competition. If either is not an element of each and every part of the race, then the course setter has not catered to the individuality of the sport.

To satisfy the need for good running is the easiest task for the course setter. Although competitors need to stop to read the map, this does not eliminate testing their endurance, because the distance of the competition has to be covered by each individual on his own.

The course setter must balance the running with a demand for an equal amount of orienteering skill from each individual on every leg of the course and so preserve the individuality of the orienteering and running.

Any section of the course which does not demand orienteering skills equally with running ability means a failure on the part of the course setter. At all times a good course throws a simultaneous demand upon the individual's orienteering skill and his running ability. The most important points for guaranteeing the individuality of the orienteering and the running are as follow:

a. *Choice of Terrain.* The competition area will be a decisive factor for the course setter. Featureless terrain is bad. Hilly, variable and many-featured terrain is ideal, because it will offer the course setter chances to pose difficult problems necessitating careful orienteering. However, terrain with many "catching" features such as roads, railways, large streams, many buildings, open terrain, and cultivated ground are to be avoided, because the orienteering problems will not be demanding. Also, terrain with large cliffs or extremely difficult going because of many boulders should be avoided. The terrain must be practical for hard running.

After the course setter has chosen his area, he must then set the course in such a way as to utilize the best orienteering terrain and avoid the worst. The course must be drawn where the terrain is best suited to orienteering.

b. *Map Reading.* The map reading in orienteering demands mental concentration, so this is a most important factor to be taken into account by the course setter. Every control and

every leg of the course must be carefully planned so that the competitor is required to employ map reading skills as much as possible. Anything that will exclude or simplify the map reading for the competitor should be excluded from the competition. Therefore, the course setter will choose the course in such a way as to avoid all the large and easily recognized features (fields, roads, lakes, etc.). If controls are placed beyond such major "catching" features, then the skills of orienteering will not be present, only the running without thinking will remain.

The course setter, for the longer major legs of the course, must make use of the terrain which is most detailed on the map and demands careful application of map reading skill.

The longer the distance is from the last "attack" point (a definitely recognizable feature), to the control point through difficult terrain, the greater is the demand for care and attention to map reading.

c. *The Route Choice.* The route choice is a most important and valuable factor in making a good orienteering traverse of difficult terrain, and route choosing considerably increases the mental problems. Course setters must, therefore, devote great attention to making their course offer the competitors as many route alternatives as possible between the control points. Any choice of route which will eliminate all mental effort must be avoided completely, and such a choice of route should not exist for it will afford success to the very good runner who could employ a minimum of mental effort and be successful. Above all, the course setter must attempt to ensure that the quickest route between the controls will also demand the greatest mental effort in map reading and orienteering skills.

The course setter seeks to make a selection of controls which will necessitate more calculation and mental effort from the competitor. The mental effort must not be restricted to the problem of choosing the route between the controls, but also involve balancing out the pros and cons of distance versus difficult terrain. The route choice is meant to increase, not decrease, the orienteering problems.

d. *The Choice of the Control Point.* The course setter will attempt to place the control where he needs it most, but will adopt the exact location to suit the map and the terrain conditions. The control point must not be so large and obvious that it reduces the demand made upon the competitor's orienteering skills and fails to require complete concentration by the competitor over the last few meters to the control. Small and difficult "catching" features should be sought out, to de-

An exhausted Marine orienteer crosses the finish line at an international orienteering meet.

mand more map reading, concentration and skillful orienteering the closer the competitor comes to the control.

The Start and Finish.

1. *The start.* The start must be placed in such a way to offer first class orienteering right from the start. In order that the runners will start in good orienteering terrain, the distance from the changing and prestart area, marked by streamers, is allowed to be long. It is better for the competitors to go one kilometer longer to the start than to run the first kilometer in unsuitable terrain.

2. *The Finish.* The finish demands the greatest care and attention. In order that finish times may be recorded to the exact second, the time keepers must have an unobstructed view of the finish, which should be a one direction funnel and arranged in such a direction that all of the competitors come from the same direction. In order that the finish does not deprive the race of too much time and distance, the distance from the last control to the finish should be short and marked with streamers. It is desirable to have this streamer trail marked on the map in order that all competitors will know of its location and thereby eliminate the element of chance.

COURSE DISTANCES

The following course distances are provided as guidance for the course organizer. These distances are those recommended by the British Orienteering Federation from cross-country type events, but with some understanding can be applied to the other forms of orienteering. The distances listed are not the best route, but the straight line distances from the map.

Class	*Miles*	*Kilometrs*	*Controls*
Boys under 15	1 1/2—2 1/2	under 3	4 to 8
Girls under 15	1—2	under 3	4 to 8
Junior men under 18	2 1/2—3	3 1/2—4 1/2	5 to 9
Junior women under 18	1 1/2—2 1/2	3—4	5 to 9
Intermediate Men under 21	3—3 1/2	4—6	6 to 9
Intermediate Women Under 21		3 1/2—4 1/2	5 to 9
Senior Men 21 and Over	4 (Std)	5—13	7 to 10
	5 1/2—8 (elite)		9 to 14
Senior Women 21 and Over	3—3 1/2	4—6	6 to 9
Novices	3—3 1/2	3—4	6 to 9

ORGANIZING A COMPETITION FOR CADETS

It is not difficult to organize a competition for up to one hundred men. With proper planning an officer and three NCOs can run a competition for 40 to 80 men.

If an officer is given the task of organizing an Orienteering event for his unit it would be wise for him first of all to ensure that he has the following items ready in time for the competition:

ESSENTIALS

1. *Competitors' Maps.* The latest available map of the area of the com-

petition should be obtained. The 1/25,000 scale map is ideal. Since orienteering competition normally does not cover an entire map sheet, the participant's map is usually cut or reproduced from a larger sheet. This cutting or reproducing of the competition area from a larger sheet requires annotation of the competitor's map with marginal information or other necessary notes such as the scale, contour interval, magnetic variation or declination diagram, and any special instructions. Magnetic north lines may be drawn and reproduced on the map, or this may be left for competitors to do. Because of the lack of color contrast on maps reproduced in black and white,

Master Map.

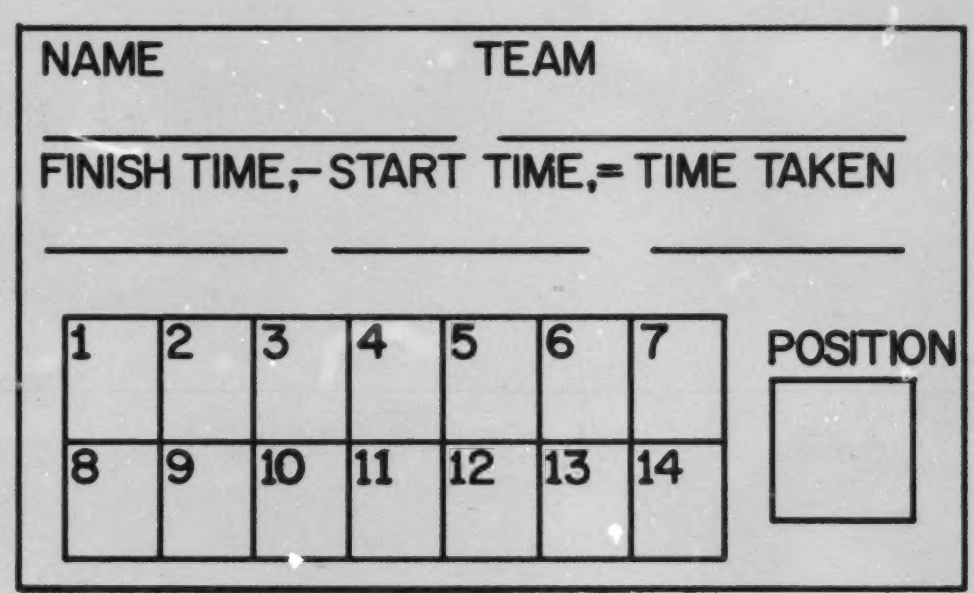
it is difficult to distinguish streams and ponds from trails and open fields. This disadvantage may be overcome by marking streams with hatched lines and ponds with parallel lines.

2. *Master Maps.* Three to five master maps should be prepared for each event. The master maps should be identical in area coverage to the competitor's map. It is ideal to cut the master maps from the original five-color topographical maps.

The course is marked on the master map with a red ball point pen. Each control should be marked with a red circle ½ centimeter in diameter. The location of the master map is marked by a triangle, and the finish is marked with a double circle. In a cross country event, the controls should be connected by straight lines in the order in which they should be visited, and each control should be clearly numbered. In a score event all the controls should be numbered, but not given their point values. The master maps should be checked by an instructor or cadet other than the individual who marked them, then stapled or tacked to the map board and covered with acetate. At the top of the map board the words are written; MASTER MAP.

3. *Event Cards.* Event cards should be prepared in advance and should be as small as possible because they are carried by the competitors in the event. Names and starting times may be filled in before the cards are issued to competitors. Numbered spaces are provided for marking by the competitor as he reaches each control point. The finish time will be entered by the time keeper at the finish line. The total time taken on the course is determined by subtracting the starting time from the finish time. A space is also provided to enter the competitor's finishing position.

4. *Clue Description Cards.* These cards are prepared after the course has been set and are issued to each competitor at the starting line. They contain descriptive clues for the location of each control point, and may



Event card.

CLUE CARD

CONTROL	DESCRIPTION	SCORE
1	THE STREAM SOURCE	
2	THE WATER TOWER	
3	THE STREAM JUNCTION	
4	THE HILL SUMMIT	
5	THE CLEARING SW END	
6	THE ROAD AND THE STREAM CROSSING	
FINISH	NEW HEMPSTEAD SCHOOL	

Clue Description Card.

also include grid coordinates for each control point. The description terminology should be checked with the guide to terminology at the end of this chapter. Some of the terms are different from those Marines use. The terms are from those used in international competition. The description sheets must be kept secret, as must the master maps, until the competitors actually start the competition.

5. *Compasses.* Either the standard military lensatic compass or the lightweight orienteering compass of the Silva type may be used. The latter compass is specially designed for orienteering and allows the orienteer to plot and measure an azimuth rapidly and accurately on a map sheet without the use of separate protractor.

6. *Time Clock.* A sports time clock is ideal for timing the start and finish of each competitor, but stop watches or wrist watches with sweep second hands may be used. Times are kept to the nearest second.

7. *Colored Tape.* Rolls of colored tape (cloth) or some other type of streamers should be on hand to use for marking lanes from the start to the master map area and from the last control to the finish.

8. *Control Markers.* A control marker will be required for each control point. These markers may be made from plywood, five-gallon ice cream tubs, plastic milk or bleach jugs, or any other suitable device. They should be painted red and white for easy visibility.

At each control marker there must be some kind of marking device with which the orienteer can mark his event card. This may be a punch, a self-inking rubber stamp, different colored crayons, different letter combinations, stamps, coupons, or any other simple, unique device that can be easily transcribed onto the competitor's event card.

9. *Results Board.* Some type of results board should be made that will allow the competitors and organizers to see a running order of finish as the meet progresses. Many methods may be used. It has been found that a felt

Control markers.

board with "hook and loop" cardboard strips makes an ideal results board. Cardboard strips with masking tape placed on the back and a poster board will make another suitable results board. A chalkboard may be used, but it makes it difficult to maintain a running order of finish.

10. *Recorder's Sheet.* The recorder's sheet is used to record each orienteer's name, number, team, times, and position at the finish. For a score event, the sheet will be used to record the number and value of the controls located and the total score for each competitor.

EXTRAS

1. *Numbers.* In major competition every competitor is issued a number in relation to the time for his start. In other words a competitor starting a 11:26 will be issued a surcoat (a double bib-type apparel) with the number 26 on the front and back (if the first runner leaves at 11:01). This will enable him during the competition to see how many minutes he has gained or lost when meeting other competitors on the course. Numbers are not essential, but they add to the enjoyment of the meet.

2. *Refreshments.* These are provided at the discretion of the organizer. Some type of punch or lemonade drink is an ideal means of quenching the thirst of the exhausted competitors as they finish the course.

PLANNING THE COMPETITION

The organizer must ensure that the first competition is relatively simple. He should choose an area on the map which is suitable for the competition and pre-plan an area where he would like to place his controls. He will be wise if he makes the first couple of controls simple, to give the cadets confidence. Subsequent controls can be made slightly more difficult, leaving a good route-choosing problem for each. If it is a cross-country event, he must plan eight to twelve controls over a distance of two to three miles and must ensure that the controls are made in time for the competition. With an assistant, he physically checks on the ground each control that he has marked on the map. When he has decided on the exact location of the controls, he should mark each on the ground by wrapping a piece of cloth or tape around the spot where he wishes later to hang the control marker. He must also make a note of the description clue of the spot he has chosen. The assistant is there to double check that the organizer has got the exact position on the ground from the map. Once the organizer has set out the proposed control sites and maked them with cloth, he is now ready to produce enough event cards and map description sheets for each competitor as well as sufficient master maps. He must organize the order of the code letters which will be attached to the control markers for the competition and keep a copy of the master code:

Control No 1 = H
Control No 2 = X
Control No 3 = O

The morning of the competition is devoted to the actual setting up of the orienteering area. This is when the control markers are placed out, and other areas listed in the following paragraphs are set up.

1. *Assembly Area.* This is the area the competitors report to receive instructions about the competition and starting times. Once the competitors have taken care of the preliminaries at the assembly area, they will fall in,

in the order of start, and go through the following procedure:

a. Name and platoon (or any unit) checked on the recorder's sheet.

b. Number card or surcoat given to the competitor.

c. Map given to the competitor.

d. Event card given to the competitor.

e. Competitor directed toward the start.

2. *The Start.* This need only be a table with a stop watch and should be located some few minutes or less from the assembly area. The competitor on reaching the start waits until his number or name is called. He will be called about a minute before the time for the start. Once he has been called he will go through the following procedure:

a. His event card is checked with his number.

b. Any last minute instructions of hazards on the course are given.

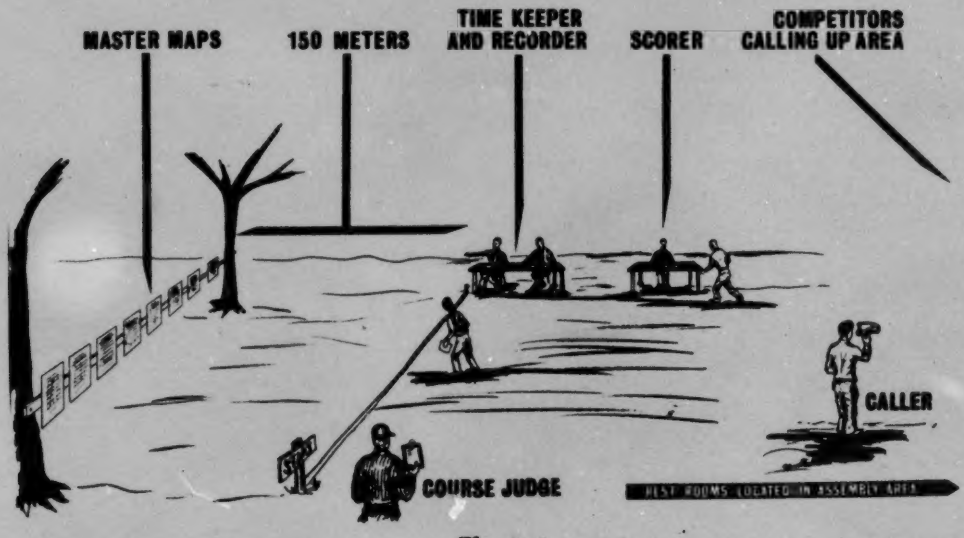
c. His description sheet is issued to him.

d. At his start time, best indicated by a whistle blast (a NCO blows the whistle on every minute, and those waiting are also warned), he sets off along the colored tape (or any other marker) to the master map area.

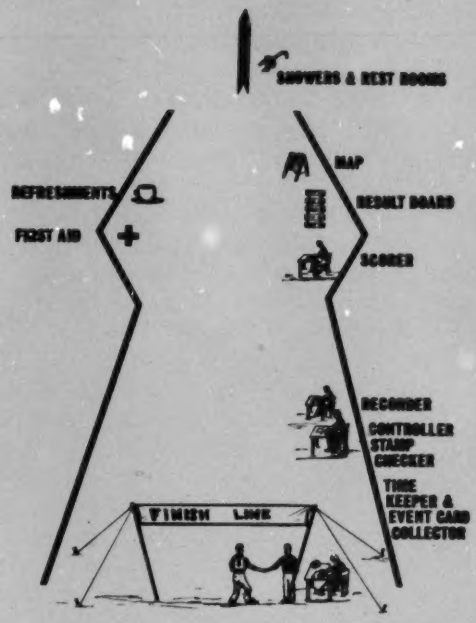
3. *The Master Map Area.* This area will be reasonably close to the start, preferably out of sight. There should be at least eight master maps. One good arrangement is to tack the master maps to a flat surface (a plank of wood or a series of tables) leaving room at the side of each map for the competitor to use.

4. *The Finish.* The finish should be near the location of the start and it should be well marked by a funnel erected with rope (engineer tape is quite suitable) and stakes and with a clear line at the end of the funnel representing the finish. Ideally, a large "FINISH" banner should be erected on poles over the top of this line. Tables should be erected as in the diagram.

5. *Conduct of an Event.* Let us imagine that a group of cadets have been assembled for a cross country orienteering meet. They will be given



The start.



The finish.

all the instructions before the event and given their start times. Once they have moved to the orienteering area and are ready to begin the competition, they will receive their numbers, event cards and maps, and then move to the area of the start. Number one should start at exactly 1001 hours (for example). Once all the competitors have passed through the master map area and have begun the competition, the officials should then bring the master maps in and move to the area of the finish.

When the first competitor arrives at the finish, an NCO should collect his event card and fill in the time of the competitor's arrival in minutes and seconds. This NCO is the timekeeper. The event card is then handed to the next NCO who checks against the master code that all the control letters have been stamped in the correct boxes, and also works out the total time of the competitor by subtracting the time of start from the time of arrival. He then passes the event card to the officer acting as recorder who checks the total time, then fills in this time on the Recorder's Sheet. The third NCO, who is also scorer, maintains the results board.

This means that within minutes of the competitor arriving at the finish, he should know his total time and his order of finish at that time. It is a good idea for the organizer to be free some of the time so that he can discuss the performance of the competitors and talk over their choice of routes and suggest ideas to improve their performance next time. An important part of any orienteering event is the competitor's discussion with each other of the course just completed. This form of critique helps to improve the unit as a whole for future competition.

HINTS FOR THE ORIENTEER

PACE COUNTING

The standard distance unit used by the orienteer is the pace. A pace is equal to two steps; in other words, the orienteer counts one pace each time the left (right) foot strikes the ground. A good idea for the orienteer is to determine the average length of his pace over varying terrain and at varying speeds and remember it! Having determined this, he should construct a set of pace scales for the map being used and paste these to his compass. This technique will enable the orienteer to measure distance in paces directly off the map in walking, trotting, or running speeds.

To aid the orienteer to keep track of the number of paces traveled, a tachometer or "clicker" can be used. Some protractor-type compasses have such a "clicker" on their base, but a "golfer's

pal" type of stroke counter can also be used. The orienteer should keep track of his paces by units of one hundred, so that a click on the counter equals 100 paces. If the tachometer or "clicker" is not available, a piece of string or a shoelace can be used with a knot tied for every 100 paces.

COMPASS ERRORS

It is always a good idea to check your compass for accuracy before orienteering. This can be done by another compass or by using compass accuracy stakes set out by officials. Remember to avoid using the compass near large metal objects or electrical sources, such as, trucks, cars, buildings, transformers, generators, or transmission lines. In fact, even another compass held too closely will cause significant deflections.

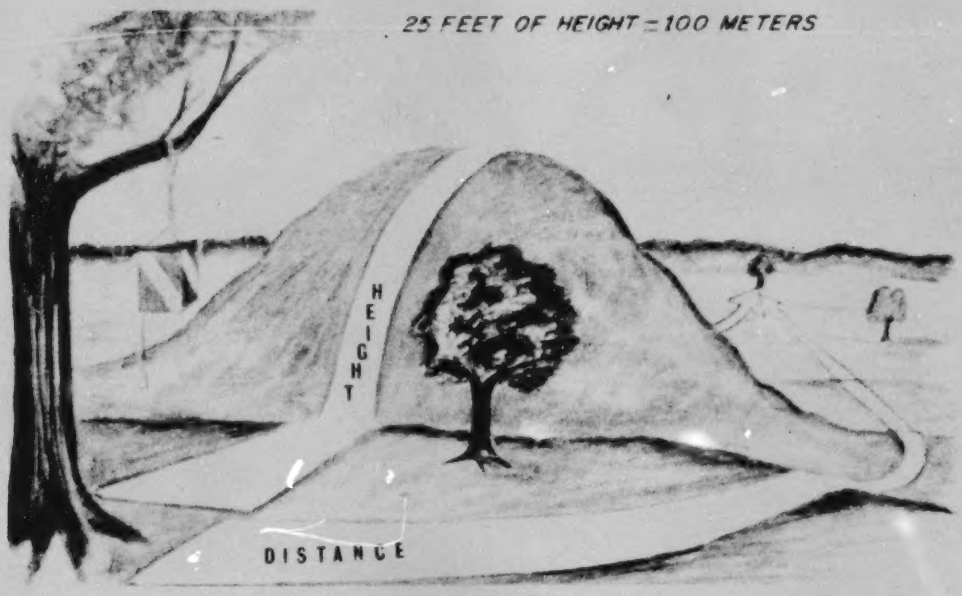
CROSS-COUNTRY TRAVEL

The conditions of the terrain the orienteer traverses will have an affect on his time and his energy expended on the course. These conditions vary from the height of terrain and its vegetation to the affects of the weather. A good orienteer will be cognizant of all these variances and allow for them in his judgment for route selection.

Detour or Climb? A properly laid out course will normally have some of its controls separated by an elevation type obstacle, be it a steep valley or a hill. This causes the orienteer to make the decision of which is the fastest, detouring or climbing. As a rule of thumb for the amount of energy expended to decide such a question use the following:

A 25-ft climb = 100 meters on the flat.

This rule is advocated by the leading English authors on Orienteering; J. R.



Climb versus detour.

Chapman, John Disley, and Gordon Pirie. It works. In the example below, the orienteer must decide whether to detour on a 500 meter leg along a contour or to climb a 100 foot hill to reach the control.

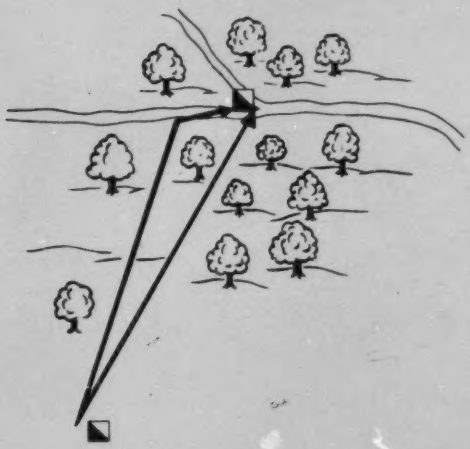
Here, the 100 foot climb is equal to 400 meters (using the formula) plus the actual ground distance of 270 meters or a total of 670 meters. Therefore, the orienteer selecting the detour saves 170 meters. BUT, be sure you study each leg carefully, evaluate your fitness, and consider time. Most orienteers prefer a "bee-line" route anyway except in very harsh terrain.

NAVIGATING TECHNIQUES

Orienteering requires one to constantly plan ahead while running, along with azimuth following, pace counting, and route selecting. As aids to your planning, listed below are several navigational techniques that you can use in assisting you in deciding which route:

Steering Marks. Following an azimuth exactly in search of a control is time consuming if the orienteer stops every 100 meters or so to site on his azimuth. To save himself time, the orienteer should select features on the ground along his azimuth as far as visibility allows. These features or "steering marks" will allow him to run along the azimuth without stopping frequently to check his compass. If the orienteer becomes proficient at this, he should be able to continue to select "steering marks" ahead of him as he runs by aligning several (2 or 3) of his marks with a new one. The savings in time here will be about 15 to 20 seconds for every compass check not needed.

Aiming Off. This technique involves following an azimuth to the right or left of a control point until reaching a linear feature or "catcher" that bypasses or passes through the control. This technique allows you to move rapidly in search of a linear feature, such as a road, a trail, or a stream, instead of rigidly following a bee-line to the control. Upon reaching the "catcher", you need only turn in the proper direction and follow it until the control is located. For example, in the sketch, the orienteer "aimed-off" to his left on the azimuth and ran until he hit the "catcher" or the trail; then he turned right and followed the trail until he located the control marker. Remember, this technique calls for good map reading and pace counting.



Aiming off.

Attack point.

Control Terminology and Definition of Features

EXAMPLES FROM 1:25000 MAP

1 The track junction

2 The track crossing

3 The track bend

4 The track end

5 The path junction

6 The path end

7 The path bend

8 The track and the path junction

9 The track and the path crossing

10 The stream source

11 The stream junction

12 The stream bend

13 The lake west corner

14 The pond

15 The outlet

16 The inlet

17 The track and the stream crossing

18 The path and the stream crossing

19 The island

20 The promontory

21 The hill summit

22 The hill summit west end

23 The hill side

24 The hill foot

25 The hill shoulder

26 The ridge

27 The spur

28 The neck

Control terminology.

Attack Points. Control points located in the woods are often difficult to find by following an azimuth a long distance or solely by terrain association. The experienced orienteer will select a well defined map feature near the control point as his "attack point." He then will proceed to it at maximum speed. Making absolutely sure he is there, he will then set off a very accurate azimuth from the "attack point" to the control.

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LEADERSHIP IN ACTION

PART THREE

DRILL AND CEREMONIES

CHAPTER 16

FRONT AND CENTER

Drill leadership is an excellent activity to develop confidence in your leadership ability. By giving proper commands and controlling a unit on the parade field, you will develop poise, self-assurance, and confidence in your ability to have men respond to your commands. You will find that the qualities of clear and logical thinking, decisiveness, and forcefulness—which you must develop for drill leadership—will be helpful in many leadership situations off the parade field.

You have probably observed that your Marine Military Instructor possesses all of those qualities mentioned above. Chances are that he was not born with those qualities. Most likely he had to work to develop them. You may not develop the "salty" cadence and military bearing of a professional Marine drill instructor overnight, but with effort and practice you can win the respect and admiration of your fellow cadets and students by leading your unit in sharp, precise drill.

DRILL INSTRUCTION

The operation of a military organization is based on discipline and a sense of purpose throughout all levels of command. The use of drill as a means of instilling discipline and training men to respond to lawful command is an important duty of all officers and noncommissioned officers. All cadets should become proficient in drill instruction and leadership so that they can assume their responsibility for the proper conduct of drill.

Basic drill instruction of cadets is conducted by the Marine Military Instructor, but cadet officers and NCOs are responsible for developing and maintaining drill proficiency within their units. This requires continuing instruction and close supervision in all drill activities. To prepare for this responsibility, each cadet must become thoroughly acquainted with common drill terms, commands, and movements. He must not only know how to execute movements, but how to teach them. The following hints will help you to develop a step-by-step method of giving instruction in drill.

1. State the name of the movement to be executed and point out its purpose.

2. Give the command to be used and its parts—the preparatory command and the command of execution.

3. Explain and demonstrate the movement to the group.

4. Have the group perform the movement while you observe closely to detect errors of execution. Make on-the-spot corrections.

5. Critique the performance and have the group repeat the movement until it is mastered before moving on to the next.

214

BY THE NUMBERS

In the early stages of instruction of a drill movement it is useful to have cadets perform "by the numbers." This is a method by which drill movements are divided into individual motions to be demonstrated, practiced, and learned—one count at a time. This method enables the cadet to learn step-by-step and permits the instructor to make detailed corrections. The instructor commands "By The Numbers" before giving the command for the movement. The first motion is made on the command of execution, and subsequent motions are made in the proper order on the commands TWO . . . THREE . . . FOUR—the number of counts depending on the number of motions in the movement. All subsequent commands are executed by the numbers until the command, "Without Numbers" is given.

PERSONAL EXAMPLE AND LEADERSHIP

A good drill instructor teaches not just by lecture and demonstration. He also teaches by personal example and leadership. During the drill periods he takes the post of the commander and places himself where he can best observe and control his unit. To get the most out of his men and the drill period the drill instructor must:

1. Follow regulations exactly, as an example to the men under instruction.
2. Demonstrate CONFIDENCE, ENTHUSIASM, and PATIENCE.
3. Display outstanding military bearing and neatness.
4. Observe his men closely and constantly.
5. Make immediate correction of all mistakes to avoid reinforcement of incorrect learning.

DRILL LEADERSHIP

The platoon is the basic unit for the conduct of drill, but the squad is ideal for drill instruction and the practice of drill leadership. When you have mastered the movements and commands of squad drill, you will have little difficulty learning to lead platoon and company drill.

Before a drill period, cadet officers and NCOs should thoroughly study the movements to be executed and practice the proper commands for execution. A drill leader must know the individual movements of every man in his unit down to the finest detail. He must also know the proper sequence of commands for various movements. It is embarrassing to command Right, FACE when the unit is standing at ease or parade rest. It is good to have a drill routine thought out in advance to avoid confusion or too much repetition. A few notes on a small card can be helpful in remembering the sequence of commands for either an instruction period or a ceremony. Even if you do not have to refer

215

to the notes, you will have the added confidence of knowing they are available if needed.

COMMANDS AND THE COMMAND VOICE

The drill instructor or drill leader must know the proper commands and must be able to project them in a strong, forceful voice. His commands must be given at the proper time, in the proper sequence, and must be audible over drums, music, or background noise. This section describes the types of drill commands and suggests ways to develop the command voice.

TYPES OF COMMANDS

A drill command is an oral order given by the commander of a marching unit for the execution of a movement. To allow precise movements, most drill commands are given in two parts—(1) a preparatory command, and (2) a command of execution. Supplementary commands are given by subordinate unit leaders.

Preparatory Command. The preparatory command states the movement to be carried out and mentally prepares the individual for its execution. In the command Forward, MARCH, the preparatory command is Forward.

Command of Execution. The command of execution is the signal to initiate the movement. In Forward, MARCH, the command of execution is MARCH. For a movement which does not require precision in execution, the preparatory command is omitted, and the entire command is given without inflection and at a uniform pitch and volume; for example: FALL IN; AT EASE; and REST.

Some commands are directive in nature and are given by the commander to subordinate commanders when he wants them to take some action. They have no preparatory command or command of execution. Examples are, "PREPARE FOR INSPECTION" and "DISMISS YOUR PLATOONS."

Supplementary Commands. Supplementary commands are given by subordinate unit commanders to repeat or modify the command of the unit commander. They are usually given following the commander's preparatory command and before the command of execution. The subordinate commander turns his head toward his element and gives the command over his shoulder. He does not face about.

Except for movements in mass formation, platoon leaders repeat all preparatory commands of the company commander, including the manual of arms. This insures that platoon members hear and understand the preparatory command and alerts them for the command of execution. The company commander allows enough time for the supplementary command before giving the command of execution. When the company commander gives the preparatory command, "Company," the platoon leader gives the supplementary command, "Platoon."

A supplementary command is given following a command which requires a subordinate element in a formation to execute a movement different from other elements, or the same movement at a different time. The subordinate leader gives an appropriate command to his element, such as "CONTINUE TO MARCH" or "STAND FAST."

GENERAL RULES FOR COMMANDS

The following rules will apply whether you are commanding a squad, a platoon, or a company.

1. While giving commands, the commander or leader is at the position of attention.

2. Officers and noncommissioned officers commanding armed troops will be armed. If armed with a rifle it will be carried at right shoulder when giving commands, drilling troops, or making reports. If armed with a sword it will be at the carry.

3. While marching, the leader must be in step with his formation at all times.

4. For executing a marching movement to the left, the command of execution (MARCH) is given as the left foot strikes the ground. For a movement to the right, the command of execution is given on the right foot.

5. The commands ATTENTION and HALT require the use of the unit designation as the preparatory command, for example, Squad, ATTENTION; or Company, HALT.

6. The commander gives AS YOU WERE to revoke a preparatory command that he has given but does not want executed. He may also command AS YOU WERE to cancel a command of execution given at the halt, or movements of the manual that are being improperly executed. In this case, the movement stops, and the men resume their former positions.

THE COMMAND VOICE

The precision with which a movement is executed is affected by the manner in which the command is given. A correctly delivered command is loud and distinct and will be understood clearly by everyone in the unit. Correct commands have a tone, cadence, and snap that demand willing, correct, and immediate response.

Voice Control. The loudness of a command is adjusted to the number of men in the unit. Normally, the commander places himself to the front and center of his unit and speaks facing his unit so that his voice reaches all the men.

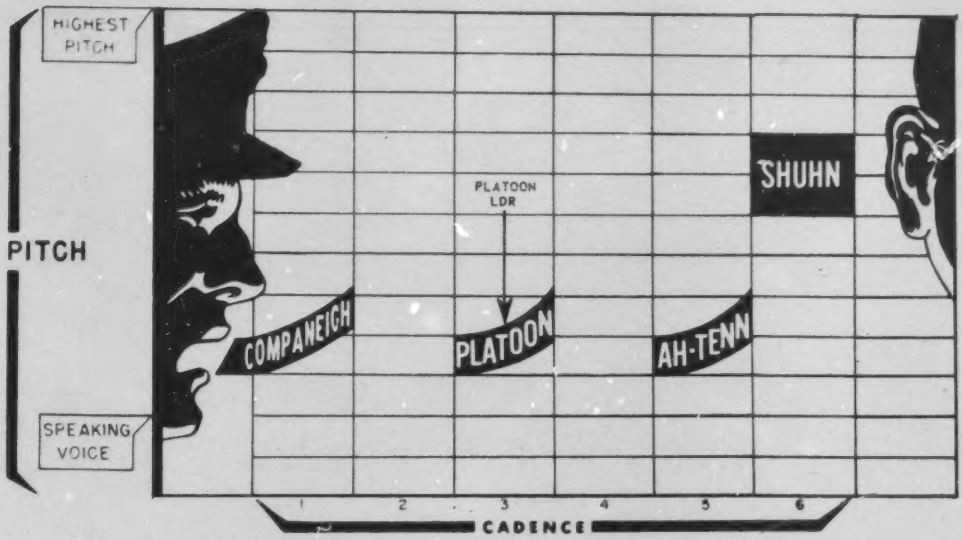
It is necessary for the voice to have carrying power, but excessive exertion is unnecessary and harmful. A typical result of "trying too hard" is the almost unconscious tightening of the neck muscles to force sound out. This will produce strain, hoarseness, sore throat, and, worst of all, indistinct and jumbled sounds instead of clear commands. Ease is achieved through good posture, proper breathing, correct adjustment of throat and mouth muscles, and confidence.

The correct posture for giving commands is the position of attention. Cadets in formation notice the posture of their leader. If his posture is unmilitary (relaxed, slouched, stiff, or uneasy) the men will imitate it.

The most important muscle used in breathing is the diaphragm, the large muscle that separates the chest cavity from the abdominal cavity. The diaphragm automatically controls normal breathing and is used to control the breath in giving commands.

Distinctness. Distinctness depends on the correct use of your tongue, lips, and teeth, which form the separate sounds of a word. Distinct commands are effective; indistinct commands cause confusion. All commands can be pronounced correctly without loss of effect. Place emphasis on correct enunciation (distinctness). To enunciate clearly, make full use of your lips, tongue, and lower jaw.

To develop the ability to give clear, distinct commands, practice giving commands slowly and carefully, prolonging the syllables. Then gradually increase your rate of delivery until you develop the proper cadence, still enunciating each syllable distinctly.



Graphic illustration of a drill command, showing cadence and inflection.

Inflection. Inflection is the rise and fall in pitch and tone changes of the voice.

The preparatory command is the command which indicates the movement. Pronounce each preparatory command with a generally rising inflection. The most desirable pitch when beginning a preparatory command is near the level of your natural speaking voice. A common fault with beginners is to start the preparatory command in a pitch so high that, after employing a rising inflection for the preparatory command, it is impossible to give the command of execution with clarity or without strain. A good rule to remember is to begin a command near the natural pitch of your voice.

The command of execution is the command which indicates when a movement is to be executed. Give it in a sharper tone and in a slightly higher pitch than the last syllable of the preparatory command. It must have plenty of snap. The best way to develop a command voice is to practice commands like Platoon, HALT.

In some commands, such as FALL IN and FALL OUT, the preparatory command and command of execution are combined. Give these commands without inflection and at uniformly high pitch and loudness comparable to that for a normal command of execution.

Cadence. Cadence in commands means a uniform and rhythmic flow of words. The interval between commands is generally of uniform length for any given troop unit. This is necessary so that everyone in the unit will be able to understand the preparatory command and will know when to expect the command of execution. For the squad or platoon in march, except when supplementary commands need to be given, the best interval of time is that which allows one step (or count) between the preparatory command and the command of execution. For example:

ONE	TWO	THREE
Platoon		HALT

The same interval is best for commands given at the halt. To develop the proper cadence, count the cadence ONE, TWO, THREE, FOUR, in quick time; then

give commands such as Present, ARMS, without interrupting the cadence:

ONE	TWO	THREE	FOUR
Present			ARMS

Longer commands, such as To The Rear, MARCH, must be started so that the preparatory command will end on the proper foot, and leave a full count between the preparatory command and command of execution—

LEFT	RIGHT	LEFT	RIGHT
To The Rear			MARCH

Pronounce each word distinctly.

For a platoon, company, or larger unit, when supplementary commands are necessary, the interval must be long enough to let the other leaders give the supplementary command for their particular units. The following example shows proper cadence for giving the command Right, FACE, to a company in line or a column of platoons.

ONE	TWO	THREE
Right (Company Commader)		Right (Platoon Leaders)
FOUR	**ONE**	**TWO**
	FACE (Company Commander)	

For exhibition drill, commands may be given without the one-step pause between the preparatory command and the command of execution. This should not be attempted with units larger than platoon size, and then only when cadets are proficient in regulation drill.

Snap. Snap is the extra quality in a command that demands immediate response. It expresses confidence, alertness, decisiveness, and complete control of yourself and the situation. Get as much snap into the commands as possible, but never neglect distinctness. Know the commands and be able to voice them effectively.

COMPANY DRILL

A company consists of a company headquarters and two or more platoons. For close-order drill and ceremonies, company headquarters personnel may be attached to platoons without interfering with the permanent platoon organization. For marches, members of the company headquarters command group are formed as directed by the company commander or higher authority.

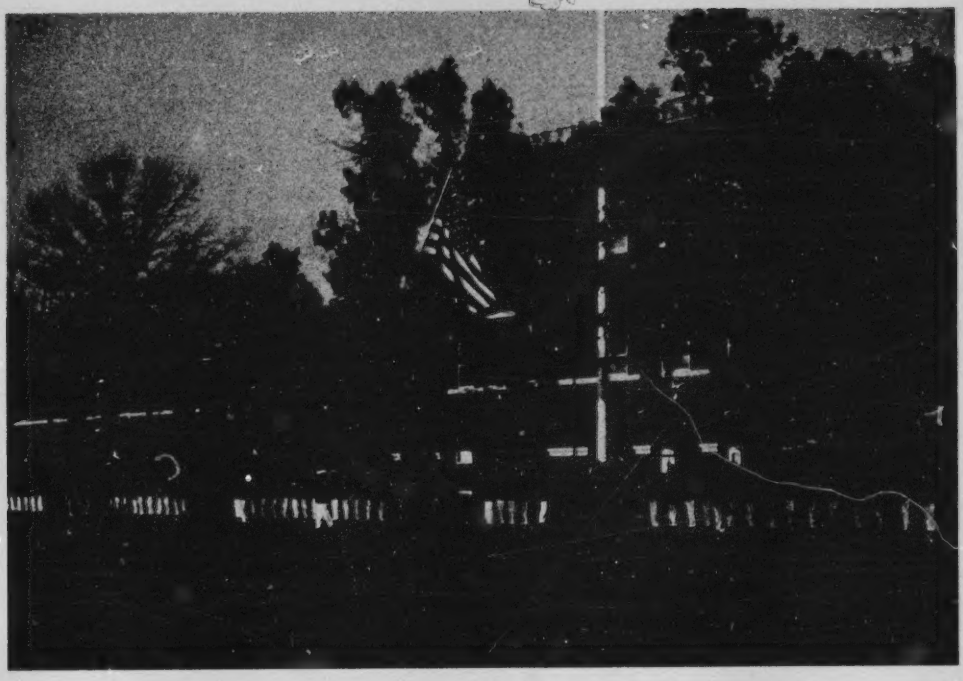
Posts of officers, key noncommissioned officers, and the guidon bearer in the various company formations for drills and ceremonies are indicated by symbols on the illustrations of company formations. The platoon, rather than the company, is the basic drill unit. Only such formations are prescribed for the company as are necessary for marches, drills, and ceremonies. The company forms in line, in column, in mass or extended mass formation, and in column of platoons in line.

The company marches, executes change in direction, closes and extends intervals between squads in column, and opens and closes ranks as in platoon drill. The company executes marchings in line only for minor changes in position.

TO FORM THE COMPANY

The first sergeant takes position nine paces in front of the point where the center of the company is to be, faces that point, and commands FALL IN. On this command, the company forms with platoons in line facing the first sergeant. Platoon guides position themselves so that there is a four-pace interval between the platoons.

Each platoon sergeant takes post three paces in front of the point where the center of his platoon will be and supervises the formation and alinement of his platoon. When the platoons



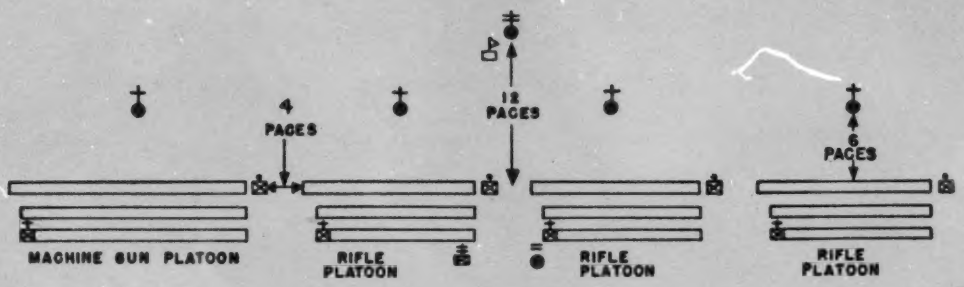
Key to symbols used in this section.

are formed, the platoon sergeants command REPORT. Squad leaders, in succession from front to rear in each platoon, salute and report, "All present," or "Private _____ absent." Platoon sergeants then command Inspection, ARMS; Port, ARMS; Order, ARMS, and face about. At the command of REPORT, given by the first sergeant, the platoon sergeants, beginning with the right platoon, successively salute and report, "All present or accounted for" or "_____men absent."

When all platoons have reported, the first sergeant commands POSTS. Each platoon sergeant faces about and moves by the most direct route to his position on the left flank of the rear squad of his platoon.

The first sergeant then faces the company commander, salutes, and reports, "Sir, all present or accounted for" or

220



Rifle Company on line.

"Sir, ------men absent." The company commander returns the salute. He may discuss absentees and issue necessary instructions to the first sergeant. When the company commander commands TAKE YOUR POST, the first sergeant faces about and moves by the most direct route to his post at the rear of the company. Upon completion of the first sergeant's report, the company commander draws sword, if so armed.

The company commander places himself 12 paces in front and center of the company in time to receive the report of the first sergeant. The second in command and officers commanding platoons take their posts when the company commander commands TAKE YOUR POST. When armed with the sword, they draw sword with the company commander.

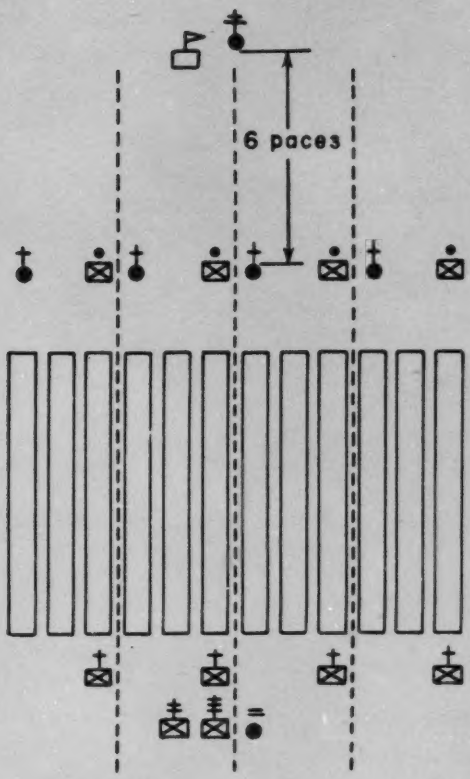
In forming the company, all who are required to salute and make a report, report in the position of salute and hold the salute until it is returned. The officer receiving the report does not return the salute until the report is completed.

TO ALINE THE COMPANY

To aline the company the company commander commands DRESS RIGHT. At the command DRESS RIGHT, the platoon commander of the right platoon dresses his platoon immediately by the commands Dress Right, DRESS. When the right, or base, platoon has completed its alinement, the other platoons aline themselves with the base platoon as each platoon commander commands Dress Right, DRESS. When the alinement of the company has been completed, the platoon commanders will bring the platoons back to attention by commanding Ready, FRONT. To aline the company at close interval, the command is At Close Interval, Dress Right, DRESS.

TO MARCH IN COLUMN

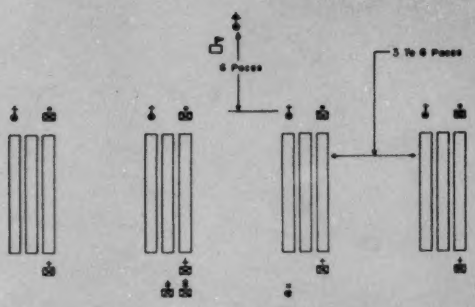
When the company is formed on line, to march the company in column the commander will command Right, FACE; Right Shoulder, ARMS; Forward, MARCH. Before he commands Forward, MARCH, the company commander and his staff will take their positions at the head of the column. The second in command of the company will march in the rear of the left squad of the rear platoon. Platoon commanders and guides will take their positions at the heads of their platoons. If necessary to better control the cadence and movement of the company, the company commander may march at an alternate position 12 paces to the left of the column at at point near the center of the column.



Rifle Company in mass formation at close interval.

OTHER COMPANY FORMATIONS

Some other formations that the company will assume for special occasions are the mass formation, the extended mass formation, and the column of platoons with platoons in line. The mass formations are normally used for parades and ceremonies when the company is part of a larger organization or formation. The column of platoons with platoons in line may be used when the company must form in an area with a limited front. This formation may also be used for inspections and the display of equipment. Each of these formations may be executed from the company in column with the company commander and platoon leaders giving



Rifle Company in extended mass formation.

the appropriate commands. These formations are shown in the illustrations.

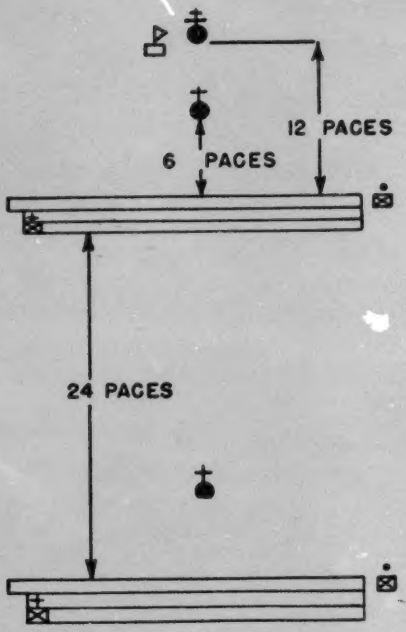
TO DISMISS THE COMPANY

The commands are First Sergeant,—DISMISS THE COMPANY. The company being in line at a halt, at the command First Sergeant, the first sergeant moves by the most direct route to a point three paces from the company commander, halts, and salutes. The company commander returns the salute and commands DISMISS THE COMPANY. The first sergeant salutes; the company commander returns the salute, returns sword, if so armed, and falls out. Other officers of the company return sword, if so armed, and fall out at the same time. The platoon sergeants take their posts three paces front and center of their platoons. The first sergeant, when his salute is returned by the company commander, executes about face. When the platoon sergeants have taken their positions, he commands Inspection, ARMS; Port ARMS; DISMISSED.

INSPECTIONS

Inspections are held by a commander to determine the state of readiness of his command. The inspection enables him to observe his men and the appear-

222



A Marine Military Instructor inspects JROTC cadets.

ance and condition of their clothing, equipment, and weapons. The inspection is also an incentive for the men to maintain their clothing in good condition—in readiness for inspection at any time.

The company is the basic unit for inspection. Battalion, regimental, and higher Commanders, or inspecting officers, inspect each company in its own area, or have it march to a specified place at a designated time for inspection. Under special conditions, an entire battalion or regiment may be inspected in one large formation. An inspection may also be conducted in connection with a review.

COMPANY INSPECTION

The company forms in line or in column of platoons in line for inspection. If organic transportation is included, it forms five yards in rear of the troops. Drivers remain with their vehicles.

When ready to inspect, the company commander commands PREPARE FOR

Rifle Company in column of platoons in line.

223

INSPECTION. At this command, the platoon commanders open ranks by platoons. The right platoon executes the initial movement. The second platoon opens ranks when the front rank of the first platoon has been dressed. The third and subsequent platoons do not begin to open ranks until the first squad of the platoon to its right has been dressed. All platoon commanders dress their squads on the corresponding squad of the platoon to their right. When the formation is a column of platoons in line, platoon commanders open ranks successively from front to rear without awaiting the dress of the platoon to their front. They cause their units to cover the corresponding files to their front. They then place themselves, facing to the front, three paces in front of the right flank man of the first rank of their respective platoons.

When all ranks have been opened, the company commander commands AT EASE. He then inspects the company. During the inspection officers, noncommissioned officers, and guidon bearers not in ranks come to attention at order arms as the company commander approaches. After being inspected, they resume at ease. The company commander may direct the first sergeant to accompany him for the purpose of taking notes. The inspection begins at the head of the column or the right of the line. The company commander inspects the arms, equipment, dress, and appearance of the personnel. As he approaches each platoon, its commander brings his unit to attention and salutes. After being personally inspected, the platoon commander returns sword (if so armed) and places himself on the right of the company commander. He precedes the company commander during the entire inspection, down the front and rear of each squad. The company commander may direct that squads having been or not yet inspected be given at ease while he inspects others. In this case the platoon commander complies, bringing them to attention for inspection at the proper time.

The inspection is made from right to left in the front, and from left to right in the rear of each rank. After inspecting the platoon commander, the company commander moves around the platoon commander's left to a position in front of the right flank man in the first rank. He moves from man to man by stepping off to the right in marching, halting and executing a left face. The platoon commander must move in the same manner so as not to be in the company commander's way.

Each man executes the movements to inspection arms for his weapon as the company commander arrives at his position. The company commander inspects the weapon of each individual. He takes the rifle by grasping it with his right hand just above the balance. The man whose rifle is being inspected immediately drops his hands to his sides. After inspecting the piece, the company commander hands it back with his right hand in the same position. The man smartly takes his piece at the balance with his left hand, closes the bolt, snaps the trigger, and returns the piece to order arms as soon as he receives it. The company commander takes and returns other weapons in the easiest manner. The pistol is returned to the holster as soon as it is handed back to the individual. A detailed inspection will include bayonets and other equipment carried.

Bayonets will be inspected when the company commander is in the rear of the rank. He will take and replace them without assistance from the man being inspected. The man will merely raise his left arm when the company commander takes and replaces the bayonet.

Upon completion of the inspection of his platoon, the platoon commander, having led the company commander down the rear of the last squad, executes column left and halts when three paces beyond the right flank man of the first rank. He faces left, calls the entire platoon to attention, and then resumes his post. The company commander passes to his right, halts, and executes about face. He than gives the platoon commander any instructions necessary. The platoon and company commanders exchange salutes and the latter proceeds to the next platoon.

Upon completion of the inspection of each platoon, its commander faces left and orders Close Ranks, MARCH. After the ranks have closed, he takes his post six paces in front of the center of his platoon and orders REST, or AT EASE.

The company commander may direct the platoon commanders to make the detailed inspection by the following order, PLATOON COMMANDERS, INSPECT YOUR PLATOONS. In this case each platoon commander complies. They may direct their platoon sergeants to accompany them for the purpose of taking notes. The company commander will normally spot check individuals while platoon commanders are inspecting their platoons. In this case men at ease will automatically come to attention upon his approach, and to inspection arms if he stops in front of them, regardless of whether they have been previously inspected.

Should the inspecting officer be other than the company commander, the latter will face the original front of his company after commanding AT EASE. Upon approach of the inspecting officer, the inspection proceeds as previously explained. The company commander follows the inspecting officer.

225

PASS IN REVIEW

Although a man may inherit the physical appearance of a leader, or develop personality traits which would assist him as a leader, the skills of leadership must still be learned; no one is a born leader. One of the key tools in teaching leadership is military drill, for it is on the drill field that we first begin learning to follow instructions, in order that we might learn to give effective commands.

a. How will personal characteristics developed while studying and practicing drill leadership be useful in other pursuits besides the military?

b. Discuss lessons you have learned by observing others. List experiences in your school and personal life which typify teaching by example.

c. Of what benefit is a strong and confident voice in all endeavors?

d. Why are there several different drill formations for a company size unit—why wouldn't one formation be sufficient?

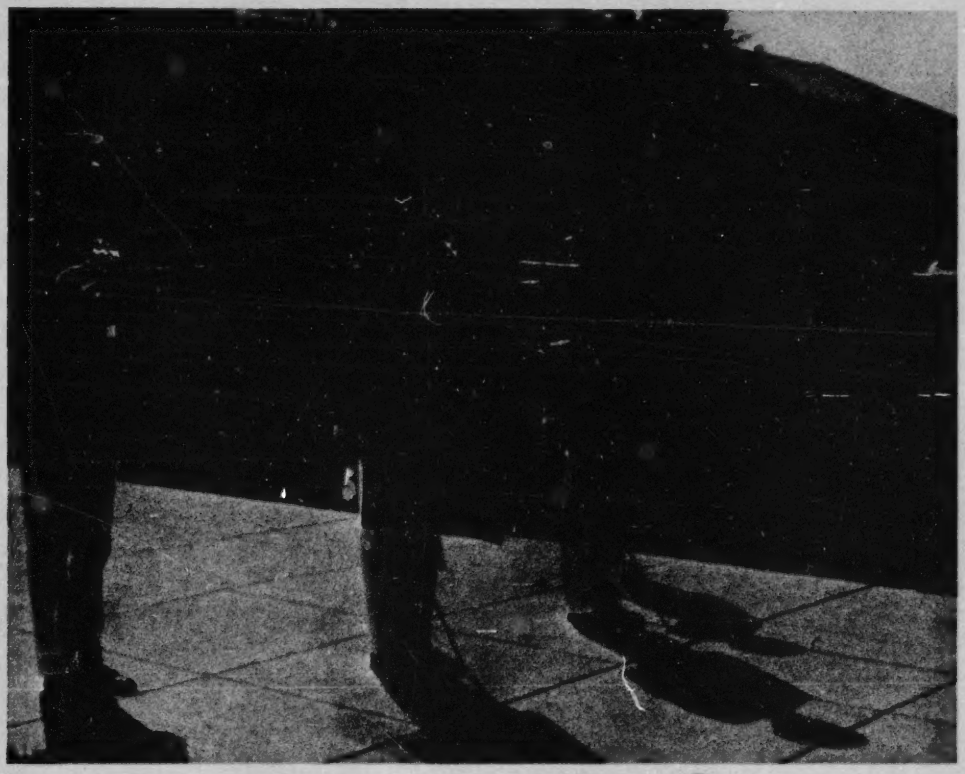
226

CHAPTER 17

SWORD AND GUIDON

The military sword is the oldest weapon still in use today. While it is no longer used as a weapon in modern armies, it remains as a symbol of authority of military leaders. In the Marine Corps it is worn by officers and staff noncommissioned officers in parades and ceremonies. The noncommissioned officer's sword and the officer's sword both have interesting histories. This chapter presents the history of each of these unique swords, and describes the manual of the sword as it is used in the Marine Corps. The Marine noncommissioned officer's sword is the same as that used by MCJROTC cadet officers and staff NCOs.

Also presented in this chapter is the manual of the guidon. The guidon is the small flag that is carried on a staff as an identifying marker for military units in the field. Like the



sword, it is now used only for ceremonial purposes, but it plays an important role in all parades and reviews. Each cadet should know how to execute the manual of the guidon correctly and smartly.

SERGEANT'S SWORD*

Maj John H. Magruder, III

Throughout most of recorded time the sword has been the symbol of the soldier's calling. With this weapon our early ancestors carved out their notches in history. As the evolution of modern arms progressed from bow and arrow through the age of gunpowder and the subsequent development of the fire arm, the sword's actual employment as a weapon was gradually relegated to a secondary role. Finally, the maturing of the repeating military rifle in the latter half of the 19th Century all but banished this ancient mark of the warrior from the battle field and consigned it to purely ceremonial use on the parade ground.

The exigencies of modern warfare have not, however, detracted from the position which the sword occupies as the badge of the military man. As the oldest form of weapon still in use, it has come to symbolize martial leadership. Those who carry it must bear the burden of continuing the heritage which has been passed down through the pages of history by the men who once used their blades in earnest.

In this respect, the non-commissioned officers of the Marine Corps have several distinctions of which they can be justly proud. They are the only non-commissioned officers in any branch of the regular United States Armed Forces who still have the priviledge of carrying swords. (Certain units of the National Guard still authorize NCO swords for ceremonial use when wearing the distinctive uniform of the regiment. Among these are the 182nd Inf Regt (The New Haven Greys), the 197th Inf Regt (7th N.Y.), 176th Inf Regt (1st Virginia) and 103rd Reconnaissance Co. (1st City Troop of Philadelphia), to name only a few. In addition, they have the unique position of being the only NCOs ever authorized to carry what is basically a commissioned officer's weapon.

The present day sword issued to the noncoms of the Corps was originally adopted by the War Department on April 9th, 1850 as the regulation saber for the foot officers of the Infantry. Based upon a French design, it was a

The present day Marine NCO sword is nearly identical to the one officers carried in the Civil War.

*From *The Marine Corps Gazette*, Nov 1954, pp. 33–35. Reprinted by permission of The Marine Corps Association.

well balanced, servicable weapon. The single edged, ornately etched blade had very little curve and appeared to be nearly straight. A false edge ran back nine inches from the point, while a wide fuller reached from the ricasso to the beginning of the false edge, and a narrow fuller extended above the broad one and was about five inches shorter. Wooden grips were covered with fish skin wrapped with twisted gilt wire and the pommel, designed after a Phrygian helmet, was decorated with floral sprays. The gilded brass guard was of the half-basket design. The weapon was sheathed in a scabbard of black leather with gilded brass fittings.

In 1859, just prior to the Civil War, the commissioned officers of the Marine Corps had adopted the Model 1850 foot officer's sword. They found it more serviceable than their lighter, Mameluke-type saber and particularly welcomed its leather scabbard which was not subject to the many dents their former brass scabbards had been forever acquiring in the hustle and bustle of close life aboard ship.

Following the War between the States, however, the repeating military rifle made rapid developments, redesigning the battle fields of the world and sounding the death kneel of the sword which was thenceforth looked upon as being more of an encumbrance than an asset in the field.

Prodded by a desire to reinstate the traditional weapon of their predecessors, especially since its purpose had become more symbolic than utilitarian, Marine officers reverted to their Mameluke sword in 1875 when the Corps entered its so-called "Golden Era" of sartorial splendor. At this time, Marine non-coms acquired the arm being discarded by their commissioned brothers-in-arms. It is this same weapon, with only minor alterations, which is still carried in Marine parade formations by the senior NCOs of the Corps.

Without doubt, the adoption of the 1850 officers' sword by the Marine non-commissioned officers was prompted by two important considerations. First, the "Golden Era" was a period when gold braid, dazzling hat plumes and furbished ornaments predominated on the military uniform. Elegant styles were being set by the army of Napoleon III of France, which was still, though not for long, the foremost exponent of military fashion on the continent of Europe. Thus, enlisted personnel as well as officers were to be decked out in the showiest accoutrements possible. Certainly their new sword fit the bill. Secondly, at the close of the Civil War, many surplus weapons were on hand in the nation's armories, so by adapting the dressy infantry officers' sword to the NCOs of the Corps, good use could be made of excess materials. But it was also a gesture of considerable respect to the Marine noncom, for never before had a badge so symbolic of the commissioned officer been turned over to the non-commissioned ranks.

At first glance, the Marine NCO sword in use from 1875 till 1934 was no different than the 1850 officers' model. Only the fish skin covering on the grip had been replaced by black leather and the letters "U.S.M.C." etched on the reverse side of the blade instead of the "U.S." which had appeared on the officers' arm. Issue numbers were normally stamped on the counter-guard above the grips and most scabbards bore a frog stud instead of carrying rings, since all but the sergeants major and quartermaster sergeants wore their swords suspended from a frog attached to their waist belts. The senior NCOs carried their sidearms on slings similar to those used by commissioned officers, and a limited number of swords were equipped with rings for their use.

After the first pay grade was established in 1937, all noncoms in this grade were authorized to carry their swords on slings until 1948, when regulations provided that all NCOs, regardless of rank, adopt the frog.

In 1934, revised regulations called for a slightly more slender blade which eliminated the narrow fuller and new decorative etching including the inscription "United States Marines." Otherwise, it remained identical to the Civil War officers' model, albeit a lighter, somewhat less serviceable version.

The commissioned and noncommissioned officers now retain the saber for what it implies to their profession rather than for the use that it offers. Their primary duty is to lead, not to shoot. The sword thus continues as the personification of military tradition and has been entrusted to those most responsible for maintaining it. Except for the famous Mameluke-hilted sword of Marine commissioned officers, adopted in 1826, the Marine NCO sword rates as the oldest weapon in American arms still in use.

It is an important emblem. In the days of the "Old Corps," when advancement was slow, the senior noncoms represented many years of service and their position in the Corps carried great prestige. In the barracks their prerogatives were unquestioned. Their right to carry the sword was a privilege that, in the eyes of the lower ranks, personified the august position to which they had attained.

While its use is now limited by regulations to "when in charge of troops on ceremonial occasions," the sword is part of that intangible "esprit de corps" which makes the Marine of today part of that long, honored muster roll on which will always be found names like Sergeant Major Dan Daly, Sergeant Major John H. Quick and Master Gunnery Sergeant Leland Diamond. The sword of today may be just a symbol, but it is a part of the Marine tradition which will serve as a vital incentive to the Leathernecks of tomorrow.

OFFICERS SWORD*

Maj J. H. Magruder, III

The sword carried by officers of the Marine Corps has a history that is nearly as old as the Corps itself. Its design is unique in the American services and today it stands as the single weapon of longest continuous use in American arms. It represents a great tradition that is perhaps unequalled in any of our armed forces.

Officially prescribed in 1826, the Marine officer's sword has a distinctive Mameluke hilt that was first introduced into the U.S. service by Marine officers stationed aboard ships of the Mediterranean Squadron during the Barbary Wars from 1801 through 1807. This sword originated with the fierce Mamelukes, hardy warriors descended from a bodyguard of Turkish slaves who served the early Sultans of Egypt. After a bloody uprising in 1250, the Mamelukes became enfranchised and started a dynasty of their own that lasted till the conquest of Egypt by the Ottomans. The sword of the Mamelukes had a curved scimitar blade and the uniquely-shaped handle that is now especially identified with the U.S. Marine Corps.

During the height of Napoleon Bonaparte's conquests, many of his marshals and senior generals had adopted the Mameluke, probably as a memento of France's Egyptian campaign. Later, it also made its appearance in the British Army where its use was restricted to general officers.

*From *The Marine Corps Gazette*, Mar 1955, p. 33. Reprinted by permission of The Marine Corps Association.

In the early days of the Marine Corps, sword regulations were not too specific, merely stipulating "yellow mounted sabres, with gilt scabbards." Thus, each officer was allowed considerable leeway in choosing his side arm. We have definite evidence that Marine officers had affected the Mameluke hilt during the first decade of the 19th Century. Most of these early blades were made in France and ornately etched. The upper portion of the blade was often blued.

By the 1820s, the Mameluke had become almost universally adopted by Marine officers, who even in those relatively early days were imbued with a tight esprit de corps that distinguished them from officers in the sister services. Consequently, on 30 January 1826, it was ordered that "all officers when on duty either in full or undress uniform, shall wear a plain brass scabbard sword or sabre, with a Mameluke hilt of white ivory and a gold tassel; extreme length of sword three feet, one inch and a half, curve of blade half an inch only, to serve as cut or thrust; the hilt in length (which is included in the extreme length of the sword) four inches and three quarters, width of the scabbard, one inch and seven eighths, width of blade one inch." Commandant Archibald Henderson directed that this order was to take place on 1 May 1826, "or sooner if practicable."

This sword remained the prescribed Marine officer's side arm until 1859, when the Model 1850 infantry officers' sword was authorized. At the time it was felt that the heavier Army weapon with its basket-type hilt was more serviceable. It had the further advantage of possessing a leather or sharkskin scab-

bard in place of the older Marine scabbard of brass which was constantly being dented in the hustle and bustle of shipboard life.

Following the Civil War, however, it became evident that the development of the breech loading rifle had more or less eliminated the use of the sword on the battlefield and relegated it to ceremonial use. Pressure was brought to bear by the officers of the Marine Corps for a return to the traditional sword which had figured so prominently in the making of the early history of their Corps. In 1875, therefore, when the Marines entered its so-called "Golden Era" of sartorial spendor, the Mameluke hilt was readopted. In place of the original brass scabbard, one of "German silver with yellow metal trimmings" was authorized. In addition, the blade was to be etched with a scroll on one side with the inscription "United States Marines" and a similar scroll on the reverse side bearing the owner's name.

Since 1875, the Marine officer's sword has remained unchanged except for the addition of a more ornate decorative etching on the blade. While its use is now restricted to the parade ground and ceremonial occasions, it represents a past that is steeped in tradition, a continuity of service that makes every Marine officer of today a member of the small band of brother officers who made up the "Olds Corps" of Presley O'Bannon, William S. Bush, John Marshall Gamble, Archibald Henderson, Levi Twiggs, Littleton Waller, Smedley D. Butler and the others who have carried this sword with such honor both to themselves and to their Corps.

MANUAL OF THE SWORD

GENERAL RULES

The following general rules will be followed by cadets armed with the sword:

1. Officers and non-commissioned officers execute the sword manual in the same manner.

2. Officers and NCOs draw and return sword, without command, when the commander of their unit does. All other movements are executed on the commander's command to the unit.

3. The commander of a unit and his staff execute movements of the sword manual on the commander's separate command to his staff, given after his command to the unit.

4. The sword will be drawn whenever with armed troops, or in command of a unit.

5. Carry sword is assumed when:

(a) Giving commands.

(b) Changing position in formation at quick time.

(c) Addressing or being addressed by a senior.

(d) The preparatory command is given for and while marching at quick time.

(e) Any of the following movements of the manual of arms is ordered:

(1) Right or left shoulder arms.

(2) Port arms.

(3) Sling arms.

(4) Inspection arms.

6. Personnel in formation with other personnel to the front at normal distance or less will remain at carry sword except when at ease, rest, or parade rest.

7. Present sword is assumed when:

(a) Saluting with the sword.

(b) The unit is presented to the colors or to persons, or when the *National Anthem, To the Color, Retreat,* or *Hail to the Chief* is played.

(c) Executing eyes right (left) while marching past a reviewing officer or stand. (Personnel in the interior of a formation remain at the carry.)

8. While marching with the sword at the carry, the arms swing naturally. Do not hold the scabbard or sling.

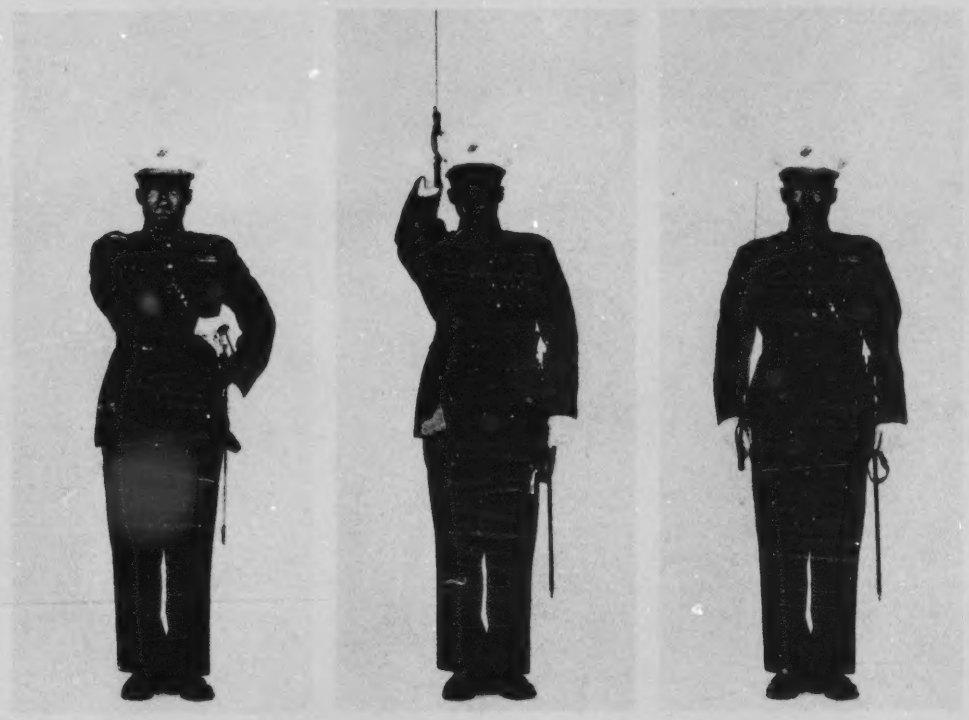
9. While marching at double time, hold the sword diagonally across the chest with the sharp edge toward the front. Hold scabbard with the left hand just below the frog.

10. When calling roll, reading documents, or publishing orders to a formation, slip the fingers of the left hand between the sword grip and guard. Allow the sword to hang, grip to the front across the knuckles. Keep the left elbow against the side. Hold the document with both hands.

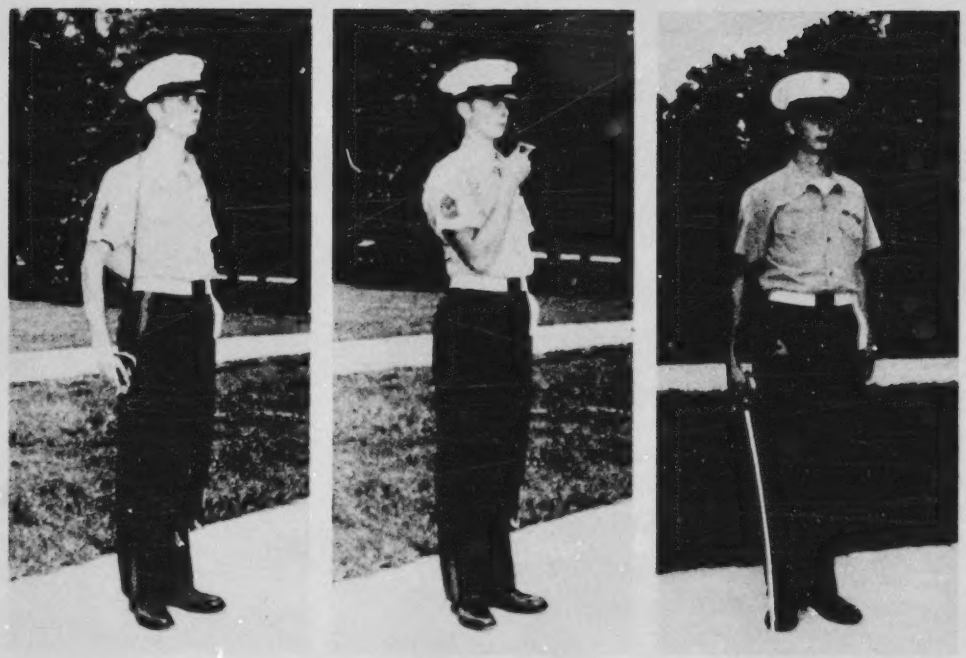
11. When not in formation, keep the sword in the scabbard. Salute by executing the hand salute.

DRAW SWORD

The command (for instructional purposes) is Draw, SWORD. On the preparatory command (Draw), grasp the scabbard with the left hand just below the frog, tilting it forward at an angle of 45 degrees. Grasp the grip with the right hand and pull the sword out approximately 10″ from the scabbard with the right forearm parallel to the deck and the left hand holding the scabbard against the side. On the command of execution (SWORD), draw the sword smartly, raising the right arm to its full extent, directly to the front, blade at an angle of 45 degrees, sword in a straight line with the arm, true edge down; releasing the left hand from the scabbard. PAUSE FOR ONE COUNT.



Draw Sword to Carry Sword.



Present Sword.

Bring the back of the blade against the shoulder seam, blade vertical, knuckle bow to the front, the right arm nearly extended, the thumb and forefinger embracing the grip, thumb on the trouser seam. The last three fingers are joined and curved naturally just behind the pommel. This is the position of CARRY SWORD.

PRESENT SWORD FROM ORDER OR CARRY SWORD

The command is Present, SWORD (ARMS). This movement is executed only when halted at order or carry sword, in two counts. On the preparatory command (Present), raise the right hand to the level of and 6″ in front of your neck. Keep the thumb on the left side of the grip, wrist firm, elbow against the body. The knuckle bow is to the left. The blade is inclined forward and up, 30 degrees from the vertical. The true edge is to the left. On the command of execution (SWORD or ARMS), whip the point down smartly to a position 3″ above the deck in front of and slightly to the right of the right foot. Straighten the right arm. The thumb remains on the left side of the grip, knuckle bow against trouserseam. The blade is inclined down and forward with the true edge to the left.

ORDER SWORD FROM PRESENT SWORD

The command is Order, SWORD (ARMS). This movement is executed in one count. On the command of execution (SWORD or ARMS), turn the true edge down. In this position, the right arm hangs naturally, thumb on

the trouser seam. The blade inclined down and forward, point 3″ above the deck.

SWORD SALUTE FROM ORDER OR CARRY SWORD

The sword salute is executed in exactly the same manner as present sword. After the salute has been returned, resume order or carry sword.

EYES RIGHT (LEFT) FROM ORDER OR CARRY SWORD

The command is Eyes, RIGHT (LEFT). This movement is executed only when halted at order sword or marching at carry sword. It is executed in two counts. On the preparatory command, (Eyes), execute the first count of present sword. On the command of execution (RIGHT or LEFT), execute the second count of present sword. At the same time, turn the head and eyes 45 degrees to the right (left). If in the right (left) file, keep the head and eyes to the front.

ORDER OR CARRY SWORD FROM EYES RIGHT (LEFT)

When executed from the halt, follow the reviewing officer with the head and eyes until they are to the front. When the movement is terminated, turn the true edge down, executing order sword. When executed on the march, the command is Ready, FRONT. On the preparatory command (Ready), turn the true edge down. On the command of executed (FRONT), smartly turn the head and eyes to the front. At the same time, execute carry sword from order sword.

RESTS WITH THE SWORD

1. *Parade Rest:* This movement is normally executed from order sword. If executed from carry sword, come to order sword on the preparatory command (Parade). The movement is executed in one count. At the command of execution (REST), move the left foot 12 inches to the left and place the left hand behind the back just below the belt, palm to the rear. At the same time, lower the point of the sword to the deck. On the command of ATTENTION, assume the position of attention, raising the point 3″ above the deck to the position of order sword.

2. AT EASE AND REST: Come to order sword, if not already at that position, and execute parade rest as described above. You may then relax, move about, keeping the right foot in place. When commanded rest, you may talk in a conversational voice. On the preparatory command (Platoon or Company), resume the position of parade rest. On the command of ATTENTION, assume the position of attention at order sword.

RETURN SWORD

The command is Return, SWORD. This movement may be executed from order sword or carry sword. On the preparatory command (Return), raise the right hand to the same position as for the first count of Present SWORD. At the same time, with the left hand, grasp the scabbard just below the frog, tilting it forward at a 45 degree angle. Lower the sword point to a position just above the throat of the scabbard. Guide the point into the throat with the left thumb and forefinger until the right forearm is parallel to the deck, and raise the head to the front. On the command of execution (SWORD),

push smartly down and release the grip of the sword with the right hand so it will slide all the way into the scabbard. In the same motion, return the right hand to the right side. Release the scabbard with the left hand and return it to the left side, assuming the position of attention.

MANUAL OF THE GUIDON

The guidon is a company identification flag. It is carried at ceremonies and other times prescribed by the commander. In garrison, the guidon may be displayed at company headquarters between morning and evening colors, except during inclement weather. The company commander will select a guidon bearer who is outstanding in military bearing and appearance and who can perform the manual in a precise and sharp manner.

Drill nomenclature of the Guidon.

RULES FOR THE GUIDON

The following general rules should be followed by the guidon bearer.

1. The guidon bearer is considered under arms and will not carry a weapon.

2. When the company is in line or mass formation, the guidon bearer's position is one pace to the rear and three paces to the left of the company commander.

3. When the company is in column the guidon bearer's position is on the right of the company commander.

4. When executing a column movement or turn, the guidon bearer executes the movement on the command of execution and then moves obliquely to his proper position on the new line of march.

5. When marching at route step or at ease, the guidon may be carried in either hand.

6. When marching at double time, the guidon will be carried with the staff across the body in a position similar to port arms. The right hand will grasp the staff at the same spot as at the carry, with the right forearm parallel with the deck and the elbow against the body.

7. On all movements and positions except present guidon, the flat side of the spearhead will face the front.

8. When at order guidon, the guidon will be brought to the carry on the preparatory command for any marching or facing movement. The guidon will be returned to the order when the movement is completed.

Order Guidon.

ORDER GUIDON

At order guidon the ferrule rests on the deck, touching the right shoe to the right of the right toe. The staff is held in the "V" formed by the right thumb and fingers. Fingers are extended naturally and joined. The staff is held straight up and rests in the hollow of the right shoulder.

CARRY GUIDON

This is the normal position of the guidon while marching at quick time. It is the same as order guidon except the ferrule is held six inches off the deck.

CARRY GUIDON FROM ORDER GUIDON

On the preparatory command for any movement such as marching or facing, the guidon bearer grasps the staff with his left hand two inches above the right. He loosens the grip of the right hand and raises the guidon vertically with the left until the ferrule is six inches above the deck. He then regrasps the staff with the right hand and cuts the left hand away smartly to the left side.

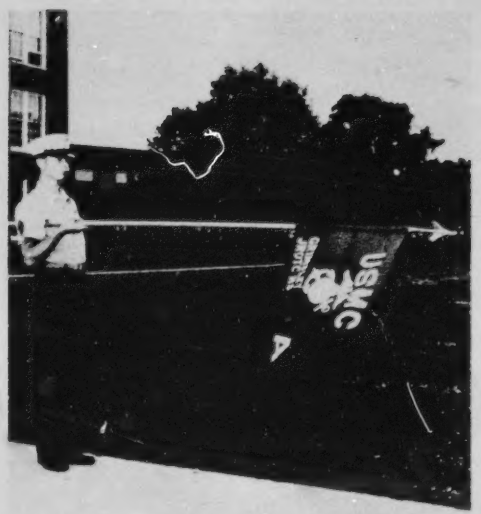
ORDER GUIDON FROM CARRY GUIDON

To return to order guidon from carry guidon, the guidon bearer lets the staff slide through his right hand until the ferrule touches the deck. This movement is executed in one count at the command Order, ARMS.

PRESENT GUIDON

This movement is performed from order guidon or carry guidon. It is executed in one count and is performed in unison with the commander's hand or sword salute. The command is Present, ARMS or Eyes, RIGHT. On the command of execution, the guidon is snapped forward to the horizontal position with the staff resting in the pit of the right arm. The right elbow is held firmly against the side to steady the staff. As the right hand is brought up and forward, the staff is rotated one-quarter turn to the right so that the sharp edge of the spearhead faces down.

At a parade ceremony when the company is passing in review, present guidon will be executed at the command of Eyes, RIGHT. It is executed in the same manner described above, except



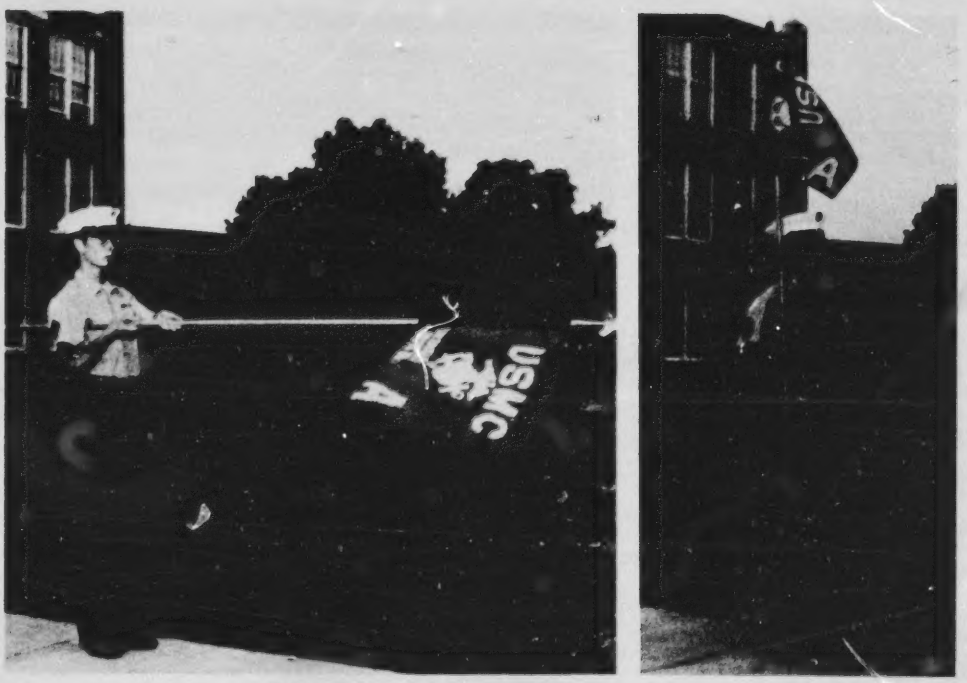
Present Guidon.

that the head and eyes are turned right 45 degrees as the guidon is lowered to the horizontal position.

ORDER GUIDON OR CARRY GUIDON FROM PRESENT GUIDON

The guidon bearer will return to the order of carry when the commander terminates his salute. The command is Order, ARMS; or Ready, FRONT.

Order Arms. On the prepartory command (Order) the staff is grasped smartly and audibly with the left hand, palm up, just forward of the right hand. On the command of execution (ARMS), the left hand carries the guidon back and up to the position of carry guidon. At the same time, the



Order Guidon from Present Guidon.

238

staff slides straight downward through the right hand until the ferrule rests on the deck. The left hand steadies the staff as it slides downward, and the right hand guides the ferrule to its proper position against the right foot. The movement is completed by cutting the left hand away smartly to the side.

Ready Front. On the preparatory command (Ready), the staff is grasped smartly and audibly with the left hand as described above. On the command of execution (FRONT), the left hand carries the guidon back and up to the position of carry guidon. As the left hand is cut away to the side the head and eyes are turned smartly to the front.

OFFICERS CENTER

At "Officers, Center" during a parade ceremony, present guidon is executed without command. When the officers and guidon bearers halt in front of the Commander of Troops, present guidon will be executed in unison with the hand or sword salute of the officers. Guidon bearers will hesitate one count following the halt before executing the movement. All movements should be completed on the fourth count after the command, Officers, HALT.

Guidon bearers will return to the carry in unison with the termination of the hand or sword salute of the officers. The command will be Ready, TWO; or Carry, SWORD.

READY GUIDON

The movement of ready guidon is executed from order or carry guidon. It is used as a signal to aid troops in the execution of commands where hearing is difficult. The guidon is brought to ready guidon on the preparatory command and smartly lowered to the order or carry upon the command of execution. Ready guidon may be used as a signal for the execution of any command except present arms and eyes right, at which times the guidon also renders honors.

GUIDON SALUTE

The guidon salute is an individual salute that is rendered by the guidon bearer when he is not in formation. It may be rendered from the order or the carry and is executed in a manner similar to the rifle salute at order arms. The left hand is moved smartly

Ready Guidon.

Guidon Salute.

across the front to a position on the staff six inches above the right hand so that the first joint of the forefinger touches the staff. The thumb and fingers are extended and joined, and the palm is down. The head and eyes are turned in the direction of the person being saluted. The salute is terminated by moving the left hand smartly back to the side and turning the head and eyes to the front.

PARADE REST

Parade rest is executed from the position of order guidon only. The movement is executed in one count in a manner similar to parade rest with the rifle. The left foot is moved smartly 12 inches to the left, and the left hand is placed behind the back, just below the belt. At the same time, the right arm is extended forward, allowing the hand to slide up the staff until the guidon is tilted forward 30 degrees. The ferrule remains in place, and the flat side of the spearhead remains facing front.

AT EASE

On the command AT EASE, the guidon is first brought to the order, if not already at that position. The movement is executed the same as parade rest, except that the guidon bearer may relax. Body movement is allowed, but the right foot must remain in place. Talking is not permitted.

REST

The command is REST. It is executed in the same manner as at ease, the only exception being that the guidon bearer may talk and hold the staff in either hand.

PASS IN REVIEW

The swords of officers and noncommissioned officers, and the guidons of organizations, are among the oldest and most traditional of the military items used by Marines. The history of the very distinctive swords worn with such pride by Marine Corps officers and staff noncommissioned officers is an integral part of the history of personal combat, just as the origin of the guidon dates back to the very earliest use of banners by soldiers of ancient times. As a pride in service, and the organization served, is a basis for good leadership, so a knowledge of the tools used by leaders is necessary to those who lead.

a. What is the importance of the uniqueness of the Marine NCO sword?

b. What is the universal appeal of a distinctive item, such as the sword—why is there personal pride associated with being eligible to wear such an item?

c. Discuss the history and traditions of Marine Corps swords.

d. Why should the guidon bearer be outstanding in military bearing and appearance?

e. Discuss the need for precision in movements of the sword and guidon.

241

MARCH ON THE COLORS

The national and organizational flags carried by military units are called Colors. The term Colors implies both the National Color and the organizational color. When used singularly the term Color implies the National Color.

Traditionally, the sergeant major is responsible for the safeguard, care, and display of the unit Colors. He is also reponsible for the selection, training, and performance of the color guard. When not in use the Colors should be displayed in the office of the commanding officer, or other appropriate place. Colors are escorted to and from the commanding officer's office by the color guard.

For protection during transportation, storage, or inclement weather, Colors may be furled and put in their protective covers. When the Colors are in their protective covers they are said to be "cased." Colors which are kept cased and not used often should be unfurled and aired frequently.

GENERAL RULES CONCERNING COLORS

The following general rules concerning colors will be followed:

1. Colors may be carried in any formation in which two or more companies participate, and in escorts and honor guards when directed. Unless otherwise directed for special ceremonies, the organizational color will not be carried without the National Color. However, the National Color may be carried alone.

2. During a review, parade, or honor guard, ordinarily only one National Color will be present. In a regimental formation, only the Colors of the regiment will be carried. When two or more separate battalions are formed as a regiment, only the colors of one battalion will be carried for the regiment.

3. When carried with other colors the National Color will be given the position of honor on the right.

4. Colors are never permitted to touch the ground or floor.

5. Colors remain at ORDER COLOR during the manual of arms.

6. A color guard does *not:*

   a. Double time.

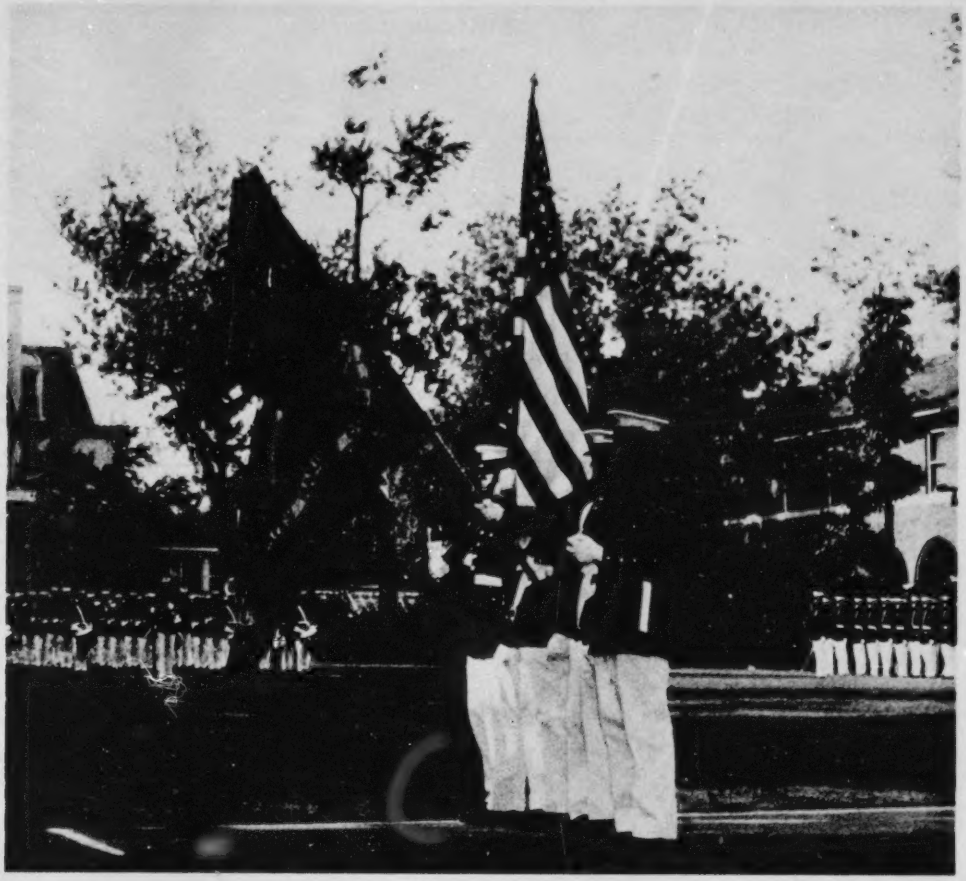
   b. Face to the left.

   c. Face or march to the rear.

   d. Fix bayonets.

   e. Salute or execute EYES RIGHT from the position of ORDER COLOR.

The color guard consists of four men. Two noncommissioned officers are the color bearers, and two other men, junior to the color bearers, are the color guards. The color bearers are unarmed, but the color guards carry either rifles or pistols. The senior color bearer is the color sergeant. The color sergeant carries the National Color and commands the color guard. He gives the necessary commands for movements and rendering of honors. The junior color bearer carries the organizational color,



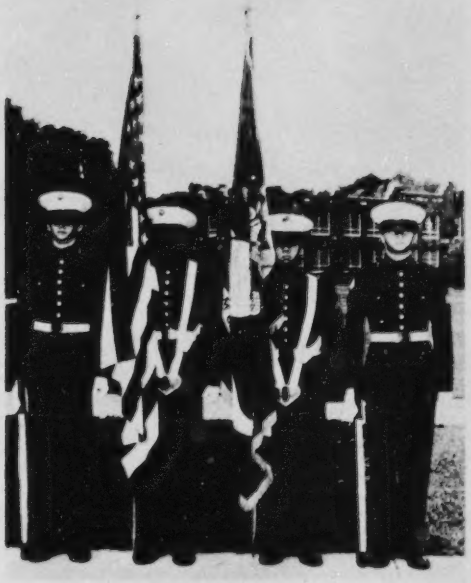
which is always on the left of the National Color. When only the National Color is carried, the color guard will include only one color bearer.

The Colors and color guard are a focal point in all ceremonies. The color guard is carefully selected and well-drilled to insure that the Colors will be displayed smartly and accorded proper honors. Careful attention is given to the dress and appearance of the color guard. All uniform items, including the sling, should be spotless. Shoes and brass should be polished to a high shine. An extra chin strap, attached to the barracks hat and worn down on the point of the chin, presents a very military appearance and prevents the Colors or wind from whipping off the cap.

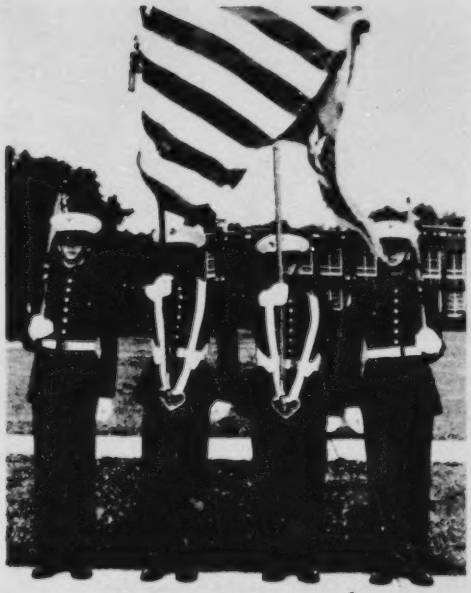
MANUAL OF THE COLORS

ORDER COLOR

At the position of ORDER COLOR, the lower ferrule rests on the ground, placed to put the staff in a vertical position. The staff is gripped from the right with the forefinger extended along the staff. The back of the right hand faces away from the color bearer. The right elbow is carried as close to the side of the body as possible to allow the right forearm to assist in support-



Order Color.



Carry Color.

ing the staff. The staff is held in the hollow of the right shoulder, perpendicular to the ground. The color bearer is at ATTENTION. The staff is held so that the flat side of the spearhead faces front. Riflemen are at ORDER ARMS when the colors are at ORDER COLOR.

CARRY COLOR FROM ORDER COLOR

Executed in three counts on commands, Carry, COLOR, or Shoulder, ARMS, given by the senior color bearer or the individual commanding a formation with which colors are posted.

1. At the command, Carry (Shoulder), the grasp of the right hand on the staff is changed so that the staff is grasped from the rear by the right hand, thumb and fingers around the staff. The staff is held vertical to the ground as it is raised to position.

2. At the command, COLOR (ARMS), the staff is raised smartly so that the lower ferrule is lifted slightly above the sling socket. At the same time, the left hand is moved across the body to assist in raising the staff. The command of execution is considered to be the first of the three counts.

3. On the second count, the ferrule is seated in the sling socket. Simultaneously, with the left hand steadying the staff, the right hand is moved down the staff to a position directly in front of the color bearer's face.

4. On the command, Ready, CUT, the color bearers' left hands move smartly to their left side.

5. In the position of CARRY COLOR, the staff is vertical with the flat side of the spearhead facing front. In high winds, the color bearer may hold the staff with both hands—left hand below the right with his elbows carried tightly against his sides.

6. During this movement, riflemen execute SHOULDER ARMS.

ORDER COLOR FROM CARRY COLOR

Executed in four counts on commands Order, COLOR or Order, ARMS.

1. At the preparatory command, Order, the color bearer stands fast.

2. On the first count, at the command of execution, COLOR, (ARMS), the color bearer lifts the staff from the sling socket with his right hand.

3. On the second count, he begins to lower the staff to the ground, using his left hand to guide it into position.

4. On the third count, the lower ferrule reaches the ground, in the position of ORDER COLOR.

5. On the command, Ready, CUT, the color bearers' left hands move smartly to their left side.

6. During this movement, riflemen execute ORDER ARMS.

Present Color.

PRESENT COLOR FROM ORDER COLOR

Executed in four counts, on the command, Present, ARMS.

1. At the command, Present, the grasp of the right hand on the staff is changed so that the staff is grasped from the rear by the right hand, thumb and fingers around the staff. The staff is held vertical to the ground as it is raised to position.

2. At the command, ARMS, the staff is raised smartly so that the lower ferrule is lifted slightly above the sling socket. At the same time, the left hand is moved across the body to assist in raising the staff. The command of execution is considered to be the first of the three counts.

3. On the second count, the ferrule is seated in the sling socket. Simultaneously, with the left hand steadying the staff, the right hand is moved down the staff to a position directly in front of the color bearer's face, with the right elbow at shoulder height and wrist straight.

4. On the command, Ready, CUT, the color bearers left hands move smartly to their left side.

5. On the first note of musical honors or on the command, Ready, DIP, of the senior color bearer, the organizational color bearer lowers the staff smartly to the front by straightening his right arm.

6. During this movement, riflemen execute PRESENT ARMS.

ORDER COLOR FROM PRESENT COLOR

Movement is the same as the movement from CARRY COLOR to ORDER COLOR, with the following exceptions:

1. On the command of execution, COLOR, (ARMS), the organizational color bearer raises the staff until his right hand is again in front of his

face. The staff should be vertical. The organizational color bearer is now at CARRY COLOR.

2. The national color bearer delays the execution of his movement until the organizational color bearer has returned to CARRY COLOR. The remainder of the movement from CARRY COLOR to ORDER COLOR, is done in unison.

EYES RIGHT FROM CARRY COLOR

Executed in one count, on the command, Eyes, RIGHT.

1. At the command of execution, RIGHT, the organizational color is dipped to the position of PRESENT COLOR. The organizational color bearer and the left rifleman execute EYES RIGHT. The national color bearer and the right rifleman continue to look straight to the front. The command is given in time to be executed six paces from the reviewing area or person to be saluted.

2. The command to return to the position of CARRY COLOR is, Ready, FRONT, executed in one count. At the command of execution, FRONT, the organizational color bearer resumes the position of CARRY COLOR. The organizational color bearer and the left rifleman bring their heads and eyes back to the front. The command is given in time to be executed six paces past the reviewing stand or person saluted.

REST

PARADE REST AND CEREMONIAL AT EASE are the only positions of REST for a color guard with uncased colors. They are assumed from the position of ORDER COLOR only. PARADE REST and CEREMONIAL AT EASE are executed in one count on the command of the senior color bearer or the commander of troops when the colors are posted.

1. For the position of PARADE REST, on the command of execution, REST, the color bearer moves his left foot twelve inches to the left. He continues to grip the staff with his right hand, as in ORDER COLOR. He places his left hand behind his back, with the forearm parallel to the deck.

2. For the position of CEREMONIAL AT EASE, on the command of execution EASE, the color bearers and riflemen move their left feet 12 inches to the left. They continue to grip staffs and rifles with their right hands, but the color bearers left hands are placed on the cup of the sling. Riflemen rotate the upper portion of their weapons to a position in front of them, leaving the butts of their rifles just outboard of their right foot, the upper most portion of the rifle is grasped with both hands.

COLOR GUARD MANUAL OF ARMS

In Marine Corps Color Guards, the left rifleman marches at LEFT SHOULDER ARMS. In Navy-Marine Corps and Joint Armed Forces Color Guards, both riflemen march at RIGHT SHOULDER ARMS. In all cases, the rifleman's free arm is carried rigidly at his side and is not swung in cadence. Riflemen march at RIGHT (LEFT) SHOULDER ARMS or PORT ARMS only.

PORT ARMS FROM ORDER ARMS

Executed in the normal manner.

PORT ARMS FROM RIGHT (LEFT) SHOULDER ARMS

On the command of execution, ARMS:

1. The left rifleman comes to PORT ARMS in two counts.

2. The right rifleman pauses one count, then comes to PORT ARMS in two counts.

PORT ARMS FROM PRESENT ARMS

Executed in the normal manner.

RIGHT (LEFT) SHOULDER ARMS FROM ORDER ARMS

Executed in the normal manner on the command, "Shoulder, ARMS".

RIGHT (LEFT) SHOULDER ARMS FROM PORT ARMS

Executed in the normal manner, except that the left rifleman pauses for one count before coming to LEFT SHOULDER ARMS.

RIGHT (LEFT) SHOULDER ARMS FROM PRESENT ARMS

At the command of execution, "ARMS":

1. Both riflemen come to PORT ARMS on the first count.

2. Left rifleman pauses one count, then comes to LEFT SHOULDER ARMS in two counts.

3. Right rifleman moves directly from PORT ARMS TO RIGHT SHOULDER ARMS in three counts.

PRESENT ARMS FROM ORDER ARMS

Executed in the normal manner.

PRESENT ARMS FROM RIGHT (LEFT) SHOULDER ARMS

1. Riflemen come first to PORT ARMS, with the right rifleman pausing initially for one count.

2. Riflemen come to PRESENT ARMS FROM PORT ARMS in unison.

ORDER ARMS FROM RIGHT (LEFT) SHOULDER ARMS

Executed in the normal manner, except that the right rifleman pauses for one count after the command of execution, "ARMS", before beginning his movement.

ORDER ARMS FROM PORT ARMS

Executed in the normal manner.

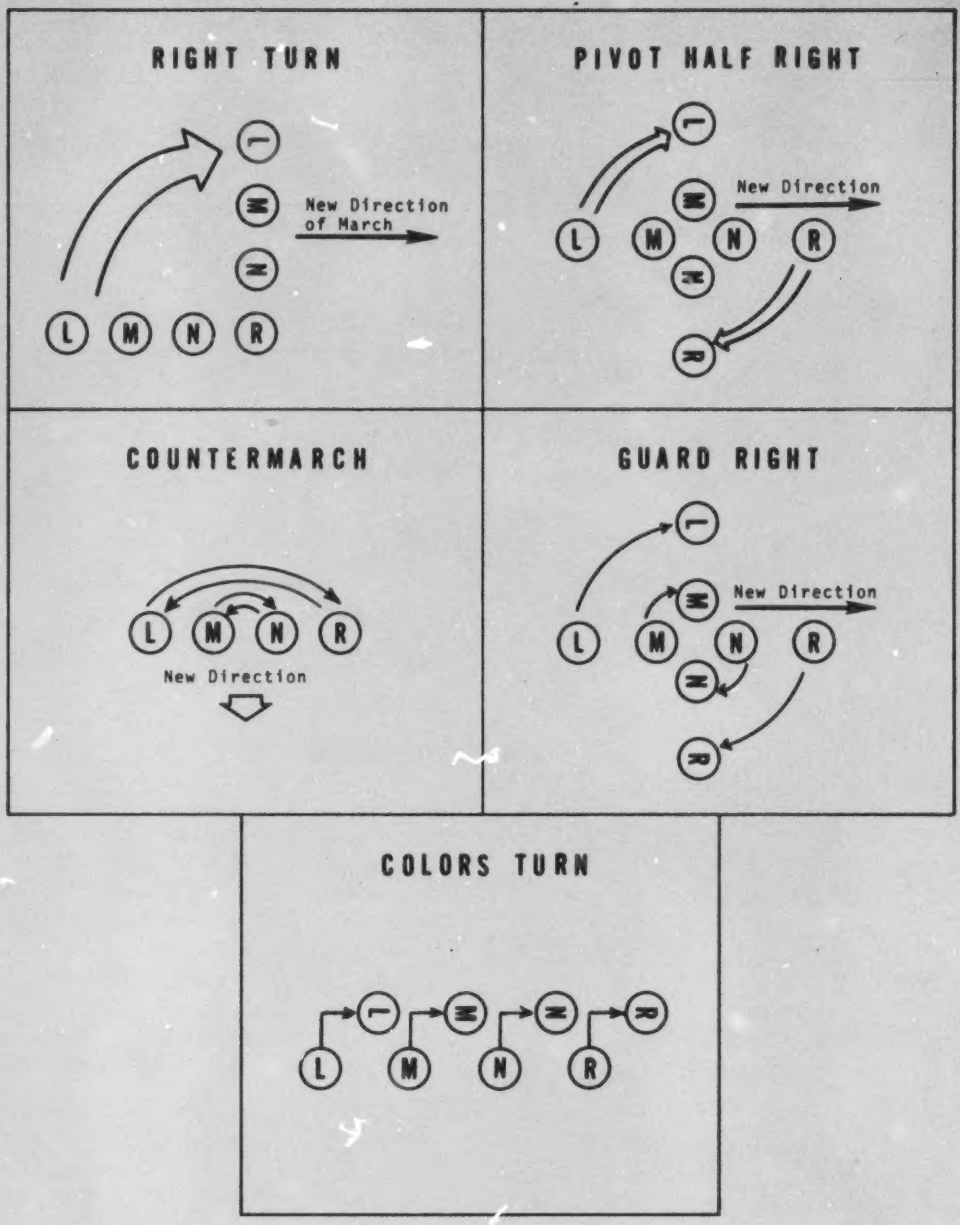
COLOR GUARD MOVEMENTS

Color guards utilize five basic movements to change direction either 90 or 180 degrees. Minor changes in direction are executed in essentially the same manner as 90 degree turns. In all color guard movements, *alignment* is critical. For this reason, gradual individual movements are preferred over sharp, distinct pivots. All commands are given by the senior color bearer.

RIGHT (LEFT) TURN

The movement to change direction 90 degrees to the right or left is executed on the command. Right (Left) Turn; MARCH.

1. On the command of execution, MARCH, the right rifleman (RIGHT TURN) or left rifleman (LEFT TURN) rotates 90 degrees around a fixed pivot point, and commences marking time.



Color Guard movements.

2. Other members of the color guard lengthen their steps as required to maintain alignment through the turning movement. At the completion of the turn, the color guard marks time until receiving the command, Forward, MARCH, with the command of execution given on the left foot.

PIVOT RIGHT (LEFT)

This movement to change direction 180 degrees is executed on the command, Pivot Right (Left), MARCH. This movement is executed only when the color guard is halted or is marking time. In a color guard with an even number of members, the pivot point is located between the two center color bearers. In a color guard with an odd number of members, the pivot is located at the spot occupied by the center color bearer.

1. On the command of execution, "MARCH," the riflemen and color bearer(s) on the side corresponding to the new direction of march will move backward and inward at the half step. Those on the side opposite the new direction on march will half step forward and inward.

2. At the completion of the pivot, the color guard marks time until receiving the command, Forward, MARCH.

PIVOT HALF RIGHT (LEFT)

Executed in the same manner as PIVOT RIGHT (LEFT), except that the direction of march is changed only 90 degrees.

COUNTERMARCH

This movement to change direction 180 degrees is executed on the command, Countermarch, MARCH. The command of execution, MARCH is given on the left foot, while marching, or on the heavy beat of the music if the color guard is halted.

1. At the command of execution, the entire color guard picks up the half step. The national color bearer makes a small arc to his left, moving into the position formerly occupied by the organization color bearer, facing the new direction of march.

2. The organizational color bearer makes an arc to his right and outside the national color bearer, moving into the position formerly occupied by the national color bearer, facing in the new direction of march.

3. The right rifleman takes two half steps forward, then moves in an arc to his left outside the organizational color bearer, moving into the position formerly occupied by the left rifleman, facing the new direction of march.

4. The left rifleman takes three half steps forward, then moves in an arc to his right outside the right rifleman, moving into the position formerly occupied by the right rifleman, facing the new direction of march.

5. Upon completion of this move, the color guard marks time until it is halted or until it receives the command, Forward, MARCH.

GUARD RIGHT (LEFT)

This movement to change direction 90 degrees is executed on the command, "GUARD RIGHT (LEFT), MARCH."

1. On the command of execution, "MARCH, which is always given on the left foot, the color bearer and rifleman on the side which corresponds to the new direction of march will move backward and inward. Those on the opposite side will move forward and inward.

2. This movement is executed in five counts.

COLORS TURN

This movement, to turn 90 degrees to the right while changing from a color guard front to single file, is exe-

cuted on the command, Colors Turn, MARCH, either from a halt or while marking time. COLORS TURN to the left is never executed, for this movement would place the organizational color ahead of the national color. The command of execution, "MARCH" is always given on the left foot.

1. When COLORS TURN is begun while marking time, the movement is executed in five count.

2. When COLORS TURN is begun from a halt, the movement is executed in four counts.

TO REDUCE COLOR GUARD FRONT

The color guard front may be reduced while marching, with the command Column of Twos, MARCH.

1. On the command of execution, "MARCH", which is always given on the left foot, both riflemen:

a. Mark time for two counts.

b. Step off forward and inward (at a 45 degree angle) on the third count.

c. Come to PORT ARMS on the third count.

TO RESTORE THE COLOR GUARD FRONT

The color guard front may be restored on the command, Front Into Line, MARCH. On the command of execution, MARCH, the national and the organizational color bearers begin marking time. The riflemen oblique outboard and pick up the mark time as they come on line. The color guard steps out or halts on the command of the senior color bearer.

SALUTES

The national color never renders a salute. The organizational color salutes by dipping, from the position of CARRY COLOR on the following occasions:

1. When the *National Anthem* is played.

2. When *To The Color* is played in lieu of the *National Anthem.*

3. When *Retreat* is played in lieu of the *National Anthem.*

4. On the command, Present, ARMS, when the national color is honored without music.

5. On the command, Present, ARMS, when honors are rendered to a reviewing officer or the dignitary.

6. On the command, Eyes, RIGHT, as the color guard marches past the reviewing area during a pass in review sequence. The salute is begun six paces before reaching the reviewing area and terminated six paces beyond the reviewing area.

RECEIVING THE COLORS BY THE COLOR GUARD

The color guard forms and marches to the appointed place to receive the Colors from the adjutant and sergeant major. The color guard halts three paces from the adjutant and sergeant major and executes order arms.

When the adjutant is ready to deliver the Colors, the color sergeant orders Present, ARMS. At this command the color bearers execute the hand salute.

The adjutant steps to his left oblique and transfers the National Color to the color sergeant, who terminates his salute in time to receive it at the position of carry color. The adjutant then steps back to his original position and salutes.

Upon the adjutant's salute, the sergeant major steps to his right oblique

and transfers the organizational color to the junior color bearer, who has terminated his salute with the color sergeant at the position of carry color. The sergeant major then steps back to his original position and salutes.

When the sergeant major salutes, the color sergeant commands Order, ARMS. The adjutant and sergeant major terminate their salutes as the color guard executes order arms. The color sergeant then marches the color guard to the appointed place.

RETURNING THE COLORS BY THE COLOR GUARD

To return the Colors the color sergeant halts the guard three paces in front of the adjutant and sergeant major who have taken their positions near the office of the commanding officer in time to receive the colors. The guard remains at carry color.

When the color guard halts, the adjutant and sergeant major salute. The sergeant major steps to his right oblique and receives the organizational color from the junior color bearer. He then steps back to his original position.

When the sergeant major is back in his position, the adjutant steps to his left oblique and receives the National Color from the color sergeant. He then steps back to his original position.

When the adjutant is in position, the color sergeant commands Order, ARMS, and Present, ARMS. At the command of execution for Present ARMS, the adjutant and sergeant major face about and march to the office of the commanding officer, where they replace the colors without further ceremony.

When the colors are out of sight or six paces away, the color sergeant commands Order, ARMS, and dismisses the guard or marches them to another location for dismissal.

COLOR CEREMONIES

Aboard Marine Corps installations, the national ensign is hoisted at 0800 and lowered at sunset each day. When Marine Corps Junior ROTC color details participate in color ceremonies at their schools they may hoist and lower the national flag in accordance with local custom.

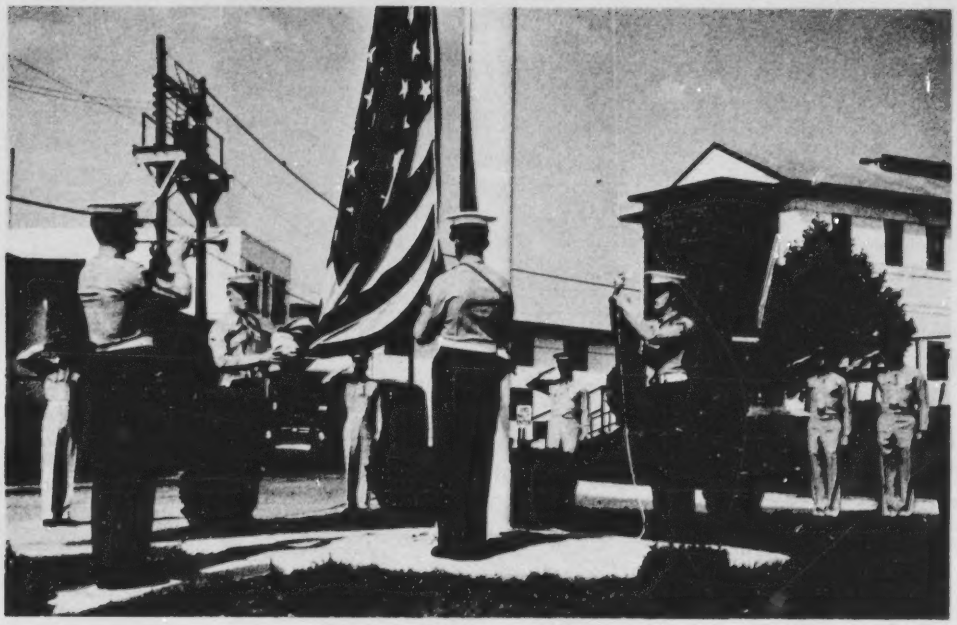
A flag detail will normally consist of one noncommissioned officer, two flag handlers, and a field music (bugler). A larger detail may be necessary for hoisting, lowering, and folding larger flags such as post and garrison flags. The members of the detail are equipped with pistol belts only.

The NCO in charge of the detail inconspicuously gives the necessary commands or directives to insure proper performance of the color detail. The color detail must be properly schooled to insure that the ensign is hoisted, lowered, and folded properly. They must never let the flag touch the ground or allow it to be flown in such a way that it might be damaged.

HOISTING THE ENSIGN

The detail assigned to hoist the ensign is formed in line with the noncommissioned officer carrying the ensign in the center. The field music marches behind the NCO. The detail is marched to the flagstaff and is positioned so that the flag handlers are on the downwind side. The field music moves to the upwind side and faces the flagstaff.

The halyards are manned by the two junior men in the detail. They free the halyards from the cleat and make certain that they are not fouled aloft. The ensign is attached to the halyards and is hoisted smartly at the first note of the *National Anthem* or *To the Color.* The noncommissioned officer continues to hold the ensign until it is hoisted



Morning Color raising.

clear of his grasp to prevent it from touching the ground. It is not necessary to completely unfold the flag before attaching it to the halyards. When the ensign is clear, he comes to attention and executes the hand salute. When the ensign is hoisted clear to the peak and the halyards are secured, the two halyard pullers execute the hand salute. On the last note of the music all members of the color detail terminate their salutes. If the ensign is to be flown at half-mast, it is first hoisted to the peak and then lowered smartly to half-mast. The detail is again formed and marched to the designated area for dismissal.

LOWERING THE ENSIGN

The detail is formed as before, marched to the flagstaff, and the halyards are manned in the same way as for hoisting the flag. On the first note of the *National Anthem* or *To the Color*, the ensign is slowly lowered. If it is at half-mast, it is first hoisted smartly to the peak at the first note of music. Salutes are rendered as when hoisting the flag. The ensign is detached from the halyards and folded as shown in the illustration. The halyards are secured to the cleat, and the detail is marched to where the flag is to be stored for safe-keeping.

252

PASS IN REVIEW

The most important symbol of a nation or organization is its flag, and thus more honor is accorded national and organizational colors than is given to any other symbol. The importance attached to these colors is equal to that placed on service to country, and cannot be over stressed. Every citizen, whether military or civilian, is obligated to know and practice those actions of respect to the flag. It is, therefore, imperative that every leader know what to do himself to show respect to the flag, and how to instruct others, particularly those assigned duties to carry, honor, and protect the colors, in the proper manner of respect.

a. List some rules for handling colors which are indicative of the honor afforded to them.

b. How does a Marine Corps color guard differ from a color guard of other services, or one composed of mixed services?

c. What may be done by guard members to maintain alignment—and why is proper alignment so important for a color guard?

d. What is the reason for never saluting with the national color?

e. Why is the unit sergeant major the individual responsible for the colors?

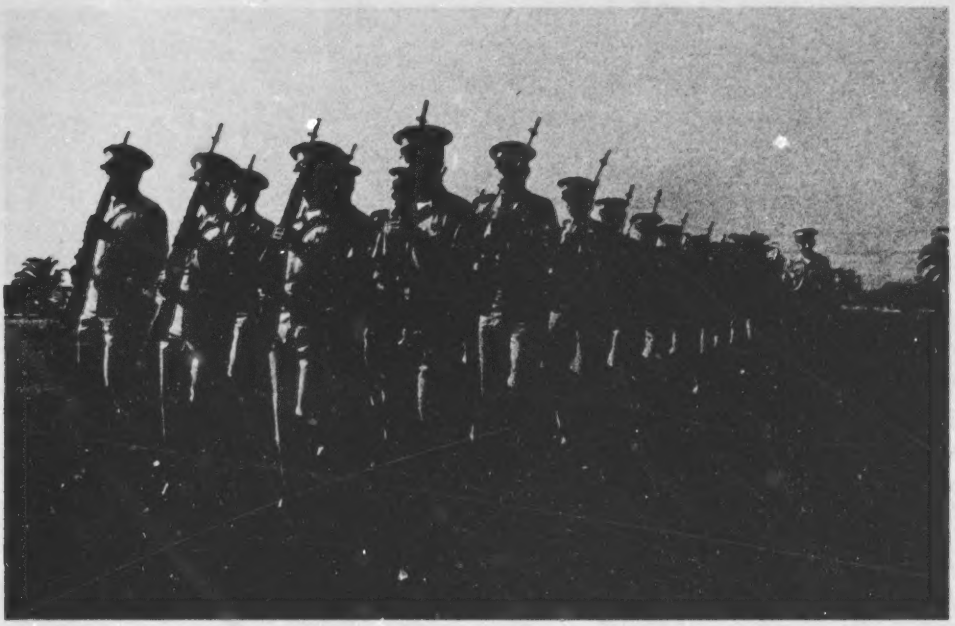
CHAPTER 19

EXHIBITION DRILL

Exhibition drill is a combination of regulation drill with unique and imaginative movements added for variety and interest. This form of drill is a good means to enhance the interest of cadets in close order drill and keep drill periods from becoming monontonous. It can also be used to stimulate friendly competition between squads or platoons in your unit, or between JROTC units of different schools. Exhibition drill also has good spectator appeal and adds color and excitement to parades, conventions, athletic contests and other public gatherings. A unit drill team will provide an extracurricular activity for unit members who enjoy close order drill and would like to develop their skills to a high level of proficiency.

FOUNDATION OF EXHIBITION DRILL

Before a unit considers exhibition drill its members must have mastered the movements of regulation drill. The normal drill movements and manual of arms are the foundation of all exhibition drill, and when done with snap and precision, they are very impressive to



watch. All drill competitions include compulsory drill which consists entirely of regulation movements and accounts for a good percentage of the total score

It is also wise to keep routines simple in the beginning. It is better to do a few routines well than to attempt a series of complicated movements and not perform any of them well. A good method is to start with one or two simple sequences and practice them to perfection before adding new ones. You can then add other sequences one at a time until you have a routine that you can perform with confidence, poise, and precision. The only restrictions on your sequences and routines is that they should be dignified and military. Shuffles, dances, jazz sequences, and rapid cadences have no place in military drill. Outstanding military drill teams, such as those of the Guard Company at Marine Barracks, Washington, D.C., perform crowd pleasing exhibitions that are unsurpassed in the world, and they do it with routines that are based on movements and sequences that are modified very little from regulation drill. Their reputation is built on superior demonstration of military teamwork and precision. A few simple movements, rifle manuals, and marching sequences are included here as suggestions for developing your own routines. You are not restricted to the use of these sequences. They are included only as beginning steps. You can develop your own sequences and routines, limited only by your imagination and inventiveness. Your Marine Instructors can give you many pointers and can help you to perfect the fine details of precision drill that make the difference between just a good drill performance and an outstanding one.

DRILL SEQUENCES

The sequences described here are designed for a platoon consisting of three squads, but they can be adapted for use by groups as small as fourteen men. They can also be adapted for a platoon with four squads. Most Army and Air Force JROTC drill teams consist of four squads.

These drill sequences may be executed from the halt or while marching. During the learning stages they should first be executed from the halt. They are all designed to be performed at the normal cadence of 120 steps per minute, but they may be done "by the numbers" for learning purposes. Unless otherwise stated, all of these sequences are begun with the platoon in column at right shoulder arms.

SQUADS TO THE REAR MARCH

The commands for this sequence are given separately for each squad. The commands are: First Squad to the Rear, MARCH; Second Squad to the Rear, MARCH; Third Squad to the Rear, MARCH. Each command of execution falls on the right foot. There is no pause between the commands for each squad, so the commands for three squads are completed in 12 counts. To return the platoon to its original formation, the commands are repeated in the same order.

RANKS TO THE REAR

The command is, Ranks to the Rear, MARCH. On the command of execution, the rear rank in the column executes to the rear, march. The next rank from the rear delays four counts and executes to the rear, march on the fifth count. The other ranks execute to

255

the rear, march in succession, with a similar four-count delay between executions. This sequence requires each man to know the total number of counts between the command of execution and the execution of the movement by his rank. To return the platoon to the original position at normal distance, the command Ranks to the Rear, MARCH is repeated, and the ranks execute to the rear march in the same order and with the same delays as before.

CLOSE MARCH

The command is Close, MARCH. On the command of execution, the platoon halts. The first squad stands fast, and the second and third squads take a left step toward the first squad. The second squad halts, and the third squad takes one more left step toward the first squad and halts. After a one-count pause, the platoon steps off marching at close interval.

EXTEND MARCH

The command is Extend, MARCH. On the command of execution, the platoon halts. The first squad stands fast while the second and third squads take one and two right steps, respectively, away from the first squad. After a one-count pause, the platoon steps off again at normal interval.

PINWHEEL MARCH

The sequence is performed from the closed formation. It consists of a series of turning movements by the individual ranks. On the command of execution each rank executes a 90 degree right turn, with the man on the right as the pivot. The turn is completed in eight counts and is followed by two steps at mark time. The ranks then do a 90 degree turn to the left, with the left flank man as pivot. This turn is also completed in eight counts, followed by two steps at mark time. This is followed by 180 degree turns to the right and left, marking time for two counts after each movement, and stepping off again in the original direction.

JONES SEQUENCE MARCH

(At Quick Time, In Column Formation.)

The command is: Jones Sequence, MARCH. At the command March, the third squad executes to the Rear, March, then executes a Left Flank, March, takes two steps, executes a Right Flank, March, takes one step and executes to the Rear, March, and continues to march. The second squad executes the same sequence four counts after the third, followed by the first squad four counts later. The sequence is executed by each squad independently, and upon completion the column is automatically re-formed moving in the original direction.

IN THE SQUALLS HALT

(From the March, In Column Formation.).

The command is: In The Squalls, HALT. The command is given on the left foot. At the command HALT, the Platoon halts, with a count of two. The First Squad then executes Left Step twice and Right Step twice, returning to the original position. The Third Squad executes Right Step twice and Left Step twice, returning to the original position. The Second Squad executes four Left Faces. All return to original positions simultaneously, then march off in the original direction on

the next count. This movement can be executed at either Right or Left Shoulder Arms.

CIRCLE MARCH

Circle March is executed from the halt or on the march while in column formation. On the command Circle, MARCH the first squad begins a circle to the left in quick time. The second and third squads pick up an exaggerated mark time. When the last man of the first squad passes the second squad leader, the second squad joins the circle. This continues until all the members are in the circle. After a desired number of turns, the first squad moves out straight for the length of the squad and picks up mark time. The second and third squads move into position abreast of the first squad by executing column half-right and half-left. When they are alined with the first squad at normal interval they pick up mark time. When the platoon is re-formed in column it can be given the command to march, halt, or begin a new sequence.

RIFLE MANUALS

The movements of the rifle manual may be performed at the halt or while marching. All movements should be executed in the normal cadence. For safety reasons these movements should not be attempted with fixed bayonets.

THE COSSACK SPIN

The cossack spin is an embellishment that can be incorporated in the rifle manual to add color and variety to normal movements. It is easy to learn and execute and is impressive to watch.

With the left hand holding the rifle at the balance as at port arms, the right hand grasps the weapon just behind the trigger guard, palm up. The rifle is then spun counter-clockwise in a complete circle and regrasped by the left hand at the balance. The right hand is then returned to the small of the stock in the normal position of port arms.

THIRTEEN COUNT MANUAL

(From Right Shoulder Arms at Quick Time).

The command is: Thirteen Count Manual Ready, MOVE. At the command MOVE, execute the first count of Port Arms. At the count of two, grasp the small of the stock with the right hand from the underneath with the palm up. At the count of three, complete the Cossack Spin. At the count of four, regrasp the small of the stock with the right hand as in Port Arms. Execute Left Shoulder Arms (counts five and six), Port Arms, (counts seven and eight), and another Cossack Spin (counts nine and ten). At the count of eleven, regrasp the rifle at the butt with the right hand. At counts twelve and thirteen execute Right Shoulder Arms.

SECURE ARMS

Secure arms is executed from port arms in three counts. On the first count the rifle is grasped with the right hand over the receiver. On the second count the rifle is moved to a horizontal position at the right side with the stock tucked under the right arm, muzzle forward, sling up. The right forearm is parallel to the deck and the left hand is on the sling above the balance to steady the piece. Palm is down, and fingers are extended and joined. On

the third count the left hand is cut away smartly to the side.

SIXTEEN COUNT MANUAL

The sixteen count manual is executed from right shoulder arms at quick time. The command is Sixteen Count Manual, Ready, MOVE. At the command MOVE, execute left shoulder arms and port arms and secure arms (counts one through nine). On counts nine and ten, strike the left leg at the trouser seam with the left arm straight, fingers extended and joined. At counts eleven and twelve strike the rifle sling (two times) with the left hand, palm down, fingers extended and joined, wrist straight, and left forearm horizontal. At the count of thirteen, move the rifle back to the diagonal position in front of the body and grasp it at the balance with the left hand as at port arms. At the count of fourteen, grasp the rifle at the butt with the right hand and complete the movement back to right shoulder arms on counts fifteen and sixteen.

ORDER MANUAL

(From Right Shoulder Arms at Quick Time.)

The command is: Order Manual, ARMS. At the command ARMS, execute left shoulder arms, port arms, and the first count of order arms in succession (counts one through seven). At the count of eight, strike the butt of the rifle on the ground to the right front, holding the rifle vertically with the right hand at the guard. At counts nine through twelve, execute right shoulder arms.

SERIES ORDER MANUAL

(From Right Shoulder Arms at Quick Time.)

The command is: Series Order Manual, ARMS. At the command ARMS, the first rank executes Order Manual. With a four count delay from the rank to its front, each rank executes Order Manual. The manual is executed in series from the front to rear with a four-count delay between ranks.

SERIES MANUAL

(From Right Shoulder Arms at Quick Time.)

The command is: Series Manual, ARMS. At the command ARMS, the third squad executes left shoulder and right shoulder arms. After the first four counts of the third squad manual, the second squad executes the manual. After the first four counts of the second squad manual, the first squad executes the manual.

QUEEN ANN SALUTE

(Executed from Right Shoulder at a Halt.)

The command is: Queen Anne Salute, MOVE. At the command MOVE, depress the rifle butt with the right hand, throwing the rifle off the right shoulder. Regrasp the rifle with the right hand at the small of the stock from the top of the rifle, at the same time stepping forward with the left foot, dropping to the right knee, rotating the rifle through 360 degrees, assisting the rifle in rotating with the left hand. The completed movement is with the rifle behind the right shoulder, muzzle up and vertical, sling to the rear, held with the right hand at the small of the stock, the team member

kneeling on the right knee, left forearm horizontal across the chest, left hand fingers extended and joined palm down at the right shoulder. Being at the Queen Anne Salute, to return to the position of attention, at port arms, the command is: Port ARMS. At the command ARMS, the team member rises and steps back with his left foot to the position of attention. At the same time, he rotates the rifle with his right hand at the small of the stock, allowing the muzzle to fall to the rear and come up from the bottom diagonally across the body to the position of port arms, grasping the rifle with the left hand at the balance.

KICK RIGHT SHOULDER ARMS

(Executed from Order Arms).

The command is: Kick Right Shoulder, Ready, ARMS. At the command ready, the right leg is swung forward approximately 8 inches and the student kicks the toe of the butt with the heel of his right foot, allowing the rifle to swing to the rear through an arc of 30 degrees. With the right hand on the upper hand guard, he swings the butt forward, turning the rifle over so that the sling is down, and grasps the rifle so that the left hand, palm up, holds the rifle at the small of the stock opposite the right thigh, right hand to the rear still grasping the rifle at the upper hand guard. The rifle is parallel to the ground, sling down, muzzle to the rear, butt to the front. At the command ARMS, allow the muzzle to drop by releasing the upper hand guard from the right hand, and with the left hand rotate the rifle in a vertical plane to the front, allowing the rifle to land on the right shoulder as in right shoulder arms. At the same time regrasp the rifle with the right hand at the butt and bring the left hand to the position of the next to last count of right shoulder arms. Then cut the left hand away smartly to the side.

POINTERS FOR DRILL TEAMS

Members of drill teams should be selected on the basis of interest, motivation, team spirit, appearance, and discipline. Size and height of drill team members is not as important as ability, but the team should be organized into a formation with the tallest members at one end and other members in order of height. This gives a uniform, even appearance to the group.

Each team should develop its own style of marching and its own routines. The manner of performing the manual and marching movements, the swing of the arms, and the positions of the fingers and hands, all are part of the unique style of a marching unit.

Precision drill requires much dedication and practice. Public performances should not be considered unless the unit is willing to make the sacrifice of time and effort that it takes to make a creditable appearance. A mediocre performance will reflect poorly upon your unit, your school, and the Marine Corps. Drill team practice should be considered as important as practice for any other team activity. Unexcused absences from practice or performances should not be tolerated. Practice sessions should not be too long. Precision drill requires complete attention and concentration by all members of the team. It is difficult to maintain this kind of concentration over a long period of time. Several short practice periods are better than one long session. The important things are regularity of practice and making good use of practice time.

The drill team captain is its com-

mander, and he should exercise good leadership and firm discipline. Drill team members should give him their complete cooperation and respond with enthusiasm to his commands and instructions.

The following pointers will be helpful in preparing a drill routine:

1. Stress the appearance and military bearing of individual team members.

2. Give attention to proper execution of the basic movements and manual of arms.

3. Develop a uniform, steady cadence of 120 steps per minute.

4. Make use of memorized movements with simplified commands.

5. Use repetition only for enlightenment of spectators, not to consume time.

6. Use imaginative rifle manuals for spectator appeal.

7. Limit routines to six or eight minutes, and use short, precise drill sequences to avoid monotony.

SUGGESTED GUIDELINES FOR JUNIOR ROTC DRILL TEAM COMPETITION

1. Drill Teams should consist of at least 14 members organized into as many squads as each unit desires, but should not consist of more than 26 members. Members should be enrolled in a Junior ROTC program.

2. Competition should be divided into two phases.

a. Phase I—Compulsory Drill consisting of "positions" and "movements" outlined in the Landing Party Manual.

b. Phase II—Precision Drill.

3. Phase I competition should be completed by all teams before beginning Phase II. The Drill Team Commander should report his team to the Senior Judge before inspection of the team and at the beginning of each drill phase.

4. A three- to six-minute time period should be used for compulsory drill and a six- to eight-minute time period for precision or fancy drill.

5. A point penalty should be invoked by each judge for each position or movement missed during compulsory drill. Although all of the positions and movements must be executed, no established sequence is required.

6. A point penalty should be invoked for failure to remain within time limits. (Note: This penalty should not be invoked by each judge but should be subtracted from the overall points for each drill phase where time limits are not met.)

7. Judges should be officers or noncommissioned officers on active duty (recruiting services, host base, etc.) or reserve personnel of the Marine Corps, Army, Navy, or Air Force.

8. Area for competition should be of hard surface and not less than 60 feet square, nor more than 100 feet square, in size. Small flags placed at each corner will provide boundary reference.

9. Drill Team Commanders should assemble prior to starting time to draw for sequence of appearance in each phase of competition. Competition should immediately follow the drawing.

10. Sequence of events:

a. Teams, in order of sequence, will move to a designated "Ready Area" for an inspection by judges for overall appearance of the team. Teams should be at open ranks for the inspection.

b. After the team has been inspected, the commander immediately moves his team so that the first squad is approximately 12 paces in front of and centered on the Senior Judge. The Drill Team Commander centers himself six paces in front of the team. He then has his team execute "Present Arms." He will then face about salute,

260

and report: "Sir (name of school or team) prepared for compulsory drill competition." The Senior Judge will return the salute and announce: "Conduct your drill movements." After having his team execute "Order Arms," the commander then conducts his team through the compulsory drill movements. Timing should begin immediately upon the team's entering the competition area.

c. After all teams have completed compulsory drill competition, there should be a rest period (10–15 minutes), so preparations can be made for precision drill competition.

d. At the conclusion of the rest period, teams should move one at a time, in order of sequence, to the drill competition area. The Drill Team Commander will again report his team to the Senior Judge in the same manner as before, except he will report his team is prepared for "Precision Drill" rather than compulsory drill. He should then conduct his team through the precision drill movements.

11. Precision drill calls for exactness and accuracy and should be judged on an individual team basis. Military bearing is also weighed in the judging of precision drill.

PASS IN REVIEW

Just as regulation drill is an essential element in military training, so precision drill, or exhibition drill, can be of much value in promoting morale and esprit de corps. The enthusiasm generated by the sharp performance of fancy drill movements will do much to enhance the respect shown your unit by all the members of a school and community. But precision drill that is anything less than precise can do more harm than good, so knowing what to do, and when to move, as a team, is essential.

a. Why is a knowledge of regular drill important in performing exhibition drill?

b. Discuss some benefits of exhibition drill to the unit and to individual members of the drill team.

c. Wny is timing all important in rifle manuals?

d. What are some things a unit can do to insure that its drill team is truly sharp in appearance and performance?

e. List some things individual members of a drill team can do to improve the appearance and performance of their team.

f. Define the basic parts of a precision drill team competition.

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LEADERSHIP IN ACTION

PART FOUR

INDIVIDUAL WEAPONS

CHAPTER 20

THE M-14

BIRTH OF A WEAPON

Throughout our history, the adoption of weapons for the infantry has often been slow, sometimes hasty, occasionally misguided, and generally accompanied by controversy. In recent times, one weapon that was introduced with a minimum of controversy was the '03 which you have already read about, but there were even those who grumbled that the action was not as smooth as the Krag-Jorgensen, its predecessor. Then the '03 died hard—and rightfully so. Even today, the '03 is revered as one of the finest military weapons of its time, and thousands of them are still being used as hunting and target rifles. The M1, however, fulfilled the pressing need for increased firepower coupled with rugged dependability. The battlegrounds of World War II and Korea

demonstrated time and again the outstanding capabilities of this rifle, but the problem of a fully automatic weapon was being studied even as the first M-1's were coming off the assembly lines. The giant steps were not taken, though, until after World War II, when, in addition to added fire-power, two other problem areas—weight and ammunition—were studied. Countries within the free world began seeking the ideal ammunition to be standardized for all allied nations. The British championed a .280 caliber; Belgium produced a rifle chambered for the German 7.92mm cartridge; the U.S. held out for a .30 caliber. Exhaustive tests were made which finally resulted in the adoption in 1953 of the U.S. T65 cartridge. This cartridge was officially accepted by the North Atlantic Treaty Organization (NATO) countries and took on the name of Caliber 7.62 NATO Cartridge.

While the search for the right ammunition was going on, the development of a new rifle was being conducted at the Springfield Armory in Massachusetts, and the first answer to the requirement was the T20E2. This weapon's major innovations were its 20 round box magazine, a longer receiver which allowed time for a cartridge to feed upward in the magazine, a selector and connector which permitted full automatic firing, a flash hider, and a roller on the bolt-operating lug which permitted continued functioning despite rain, snow, dust, etc. Despite its many internal refinements, the T20E2 looked the same as an M-1 with a magazine added.

Changes continued to be made. Eventually came model T44E4 which was tested against some of the finest European rifles of the time. The M-1, although still being used, was not even entered in the competition, because even the T20E2 had surpassed that venerable weapon's capabilities. The tests proved conclusively that the T44E4 would perform according to all specifications and was accepted in 1957 as the Rifle, 7.62mm., M-14. It had been buried in the earth like a bone, frozen in the arctic, and fired so fast and long that its barrel had burst into flames—but it kept firing. It was fired in a dust filled room and under constantly pouring water which washed away all oil and lubricant, but it did not stop firing. The weapon was designed to replace the Carbine, the M-1 and the Browning Automatic Rifle. It did just that, and even the most stubborn adherent to the M-1 had to agree that here was a truly fine military rifle.

GENERAL CHARACTERISTICS

Described officially, the M-14 is a 7.62mm, magazine fed, gas operated, air cooled, semiautomatic or automatic, shoulder weapon. Its weight when fully loaded is about ten pounds. When in the automatic fire role, the weapon will have a selector and bipod and will weigh about twelve pounds. The firing characteristics of the M-14 are as follows.

Cyclic rate of fire—700/500 RPM (Rounds per Minute).

Maximum rate of fire.
- Semiautomatic—40–60 RPM
- Automatic—120–150 RPM

Sustained rate of fire—8–10 RPM

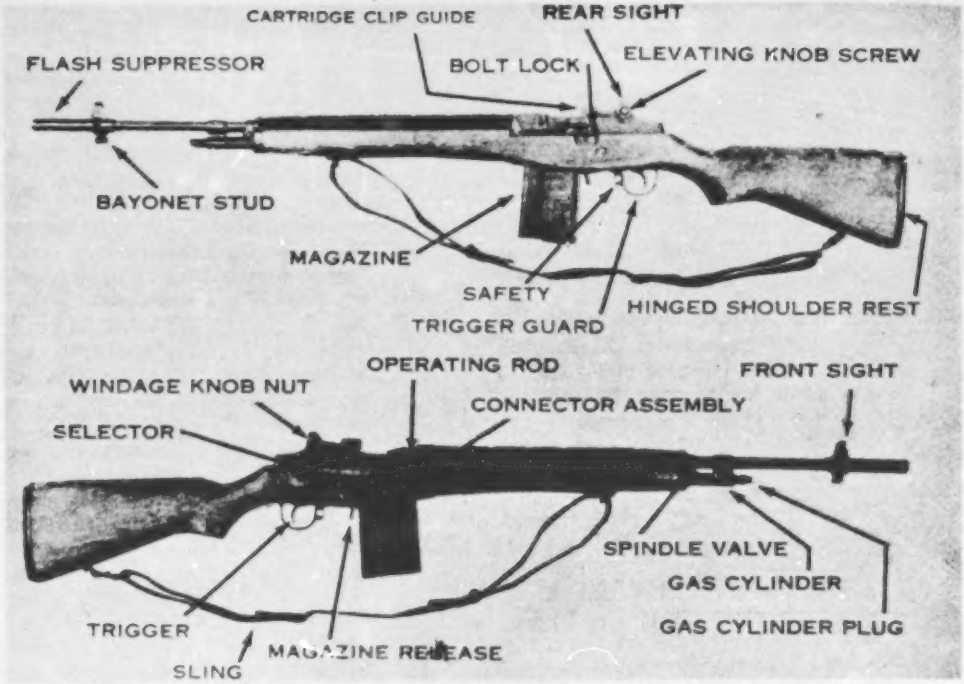
Maximum effective rate of fire.
- Semiautomatic—20–30 RPM
- Automatic—40–60 RPM

Maximum range—3,750 meters

Maximum effective range—460 meters

NOMENCLATURE

Like its predecessor, the M-1, the names of the various parts of the M-14



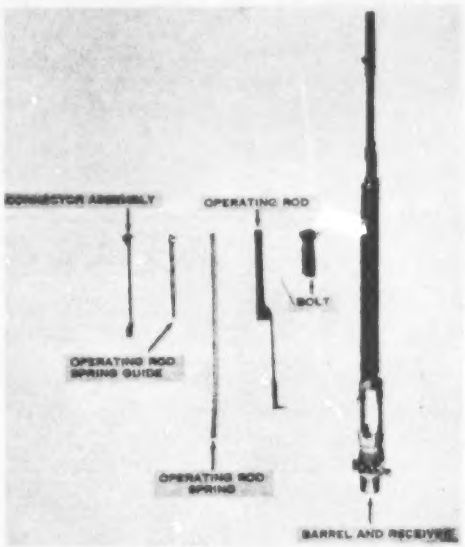
Primary nomenclature of U.S. 7.62 M–14 rifle.

usually describe the functions of the parts. Keep in mind that nomenclature is a continuous study and a big aid in understanding the functioning of any particular part of a weapon. Figures accompanying this text illustrate the nomenclature of the primary external parts of the rifle, the parts of the barrel and receiver group, and the three main groups of the M-14 Rifle.

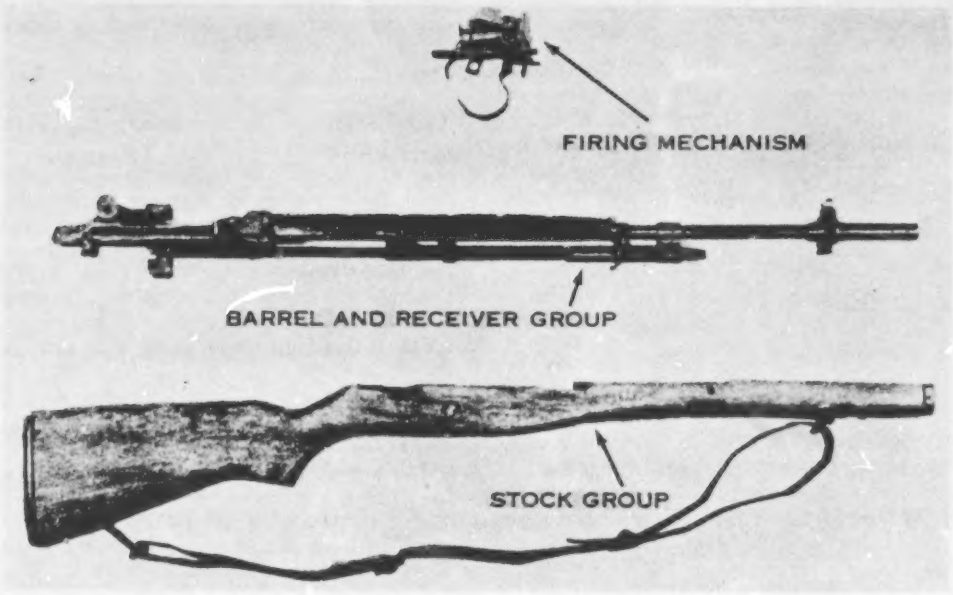
DISASSEMBLY

The only disassembly that will be covered by this text is "field stripping." This is the disassembly of the weapon only to the extent necessary for proper care and cleaning in the field as opposed to detailed stripping, which requires considerable care and attention. Like the M-1, the M-14 can be field stripped with comparative ease. The first step is to break the rifle down into its three main groups.

a. Remove the magazine.
b. Pull the operating rod to the



Parts of the barrel and receiver group in order of disassembly.



The three main groups of the M–14.

rear, check the chamber, and allow the operating rod to go forward.

c. Put rifle on safe and run down rear sight.

d. Grasp the rear of the trigger guard with the thumb and forefinger of right hand and pull up and out as far as the guard will go. Lift out the firing mechanism assembly.

e. To remove the stock, place the left hand on the small of the stock. With the hand under the butt of the stock, lift up and separate the stock from the barrel and receiver group. Notice the stock liner. It is in the M-14 to reinforce the stock and to provide a firm foundation for seating the magazine.

f. The rifle is now broken down into its three main groups.

(1) Firing mechanism assembly.

(2) Barrel and receiver group.

(3) Stock group.

Now that the weapon is in its three main groups, the next step is the disassembly of the barrel and receiver group.

Turn the barrel and receiver group so that the operating rod handle is up and the muzzle away from you. On the M-14 with automatic fire selector, turn the selector until the face marked "A" is toward the windage knob. With the bolt closed, using the thumb and index finger, push forward on the rear of the connector assembly until the forward end of the assembly can be lifted off the connector lock. Turn the connector assembly clockwise until the slot in the rear end is aligned with the elongated stud of the rear release and lift off.

CAUTION. **DO NOT BEND THE CONNECTOR ASSEMBLY OR BURR THE OVERHANG OF THE SEAR RELEASE WHEN REMOVING THE CONNECTOR ASSEMBLY.**

Place the barrel and receiver group on the table, sights down, muzzle to the left. With left hand, pull the operating rod spring toward the muzzle. With

your right forefinger, push the connector lock toward you and remove the operating rod spring and guide.

Turn the barrel and receiver group so that the sights are up and the muzzle is pointing away from you. Pull back the operating rod handle until the guide lug on its inside surface is aligned with the disassembly notch on right side of receiver. Rotate the operating rod down and out—then pull to the rear and disengage.

Grasp the bolt by the roller and while sliding it forward, lift it up and out to the right front with a slight rotating motion.

The rifle is now field stripped. This stage of disassembly is normally sufficient to perform routine care and cleaning.

ASSEMBLY

Assembly of the M-14 is essentially the reverse of disassembly, however, should there be some confusion along the way, this is the procedure.

Lay the barrel and receiver on the table, sights up, muzzle pointing away from you. Hold the bolt by the roller and locking lug, and place the rear end on the guide of the receiver, firing pin tang pointed down. Turn the bolt as far as necessary to let the tang of firing pin clear the bridge of the receiver. Guide the left locking lug into its groove; lower the right locking lug into its bearing surface, and slide the bolt halfway to the rear.

Place the front end into the operating rod guide and fit the bolt roller into the recess in the hump. Turn the operating rod to the left and position the guide lug into the disassembly notch on the receiver; close the bolt.

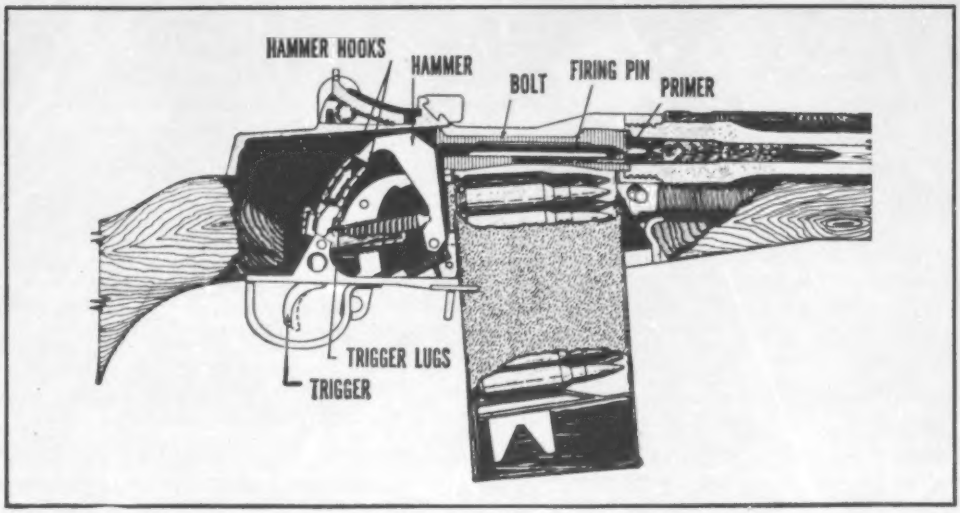
Turn the barrel and receiver so that the sights are down, muzzle to the left. Position the operating rod spring guide into the operating rod spring, *hump end up*. Then place the spring and guide inside the operating rod. Grasp the spring and guide with the left hand and compress the spring until the hole in the guide can be aligned with the connector lock. Lower the guide and push the connector lock in with the right thumb.

Turn the barrel and receiver group so that the operating rod handle is up and the muzzle is away from you. Place the hole in the rear end of the connector assembly on the elongated stud of the sear release. Using the right thumb and index finger, grasp the connector assembly at the rear, push toward the muzzle with the right thumb, and at the same time turn the front of the assembly counterclockwise and raise it onto the connector lock.

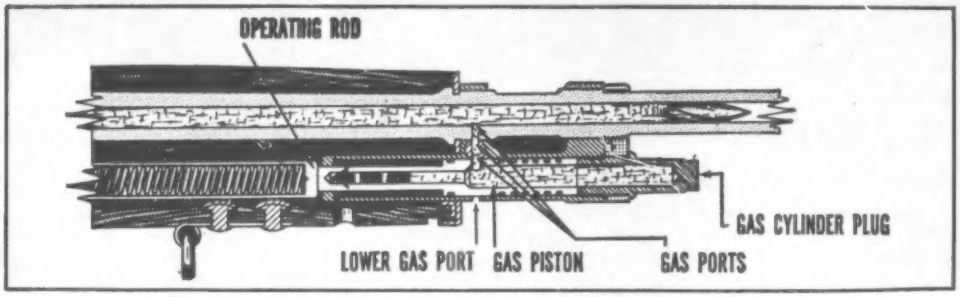
Pick up the stock group and engage the stock ferrule in the front band. Then lower the stock group onto the barrel and receiver group. Replace the firing mechanism assembly straight down into the receiver, making sure that the guide rib on the assembly enters the receiver. Close and latch the trigger guard.

FUNCTIONING

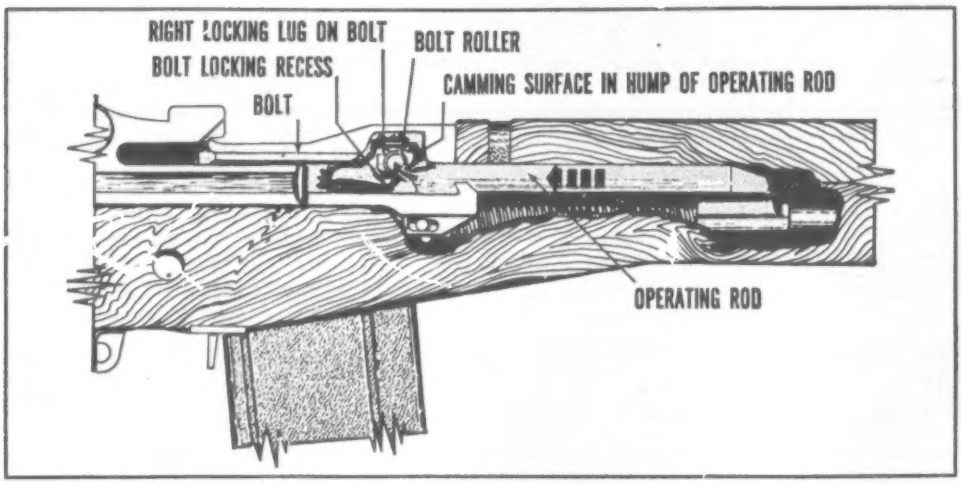
The functioning of the M-14, like the M-1, is based on the principle of gas operation. When a cartridge is fired, it creates rapidly expanding gasses that push the bullet down the bore. Before the bullet reaches the muzzle, some of the gas enters a small gas port and is directed into a hollow gas piston. As the gas expands, it starts to drive the operating rod to the rear. When the piston has traveled slightly less than 5/32 of an inch, the gas ports in the piston and barrel are no longer aligned and no more gas can enter the piston. The remaining gas follows the bullet out the muzzle.



Firing.



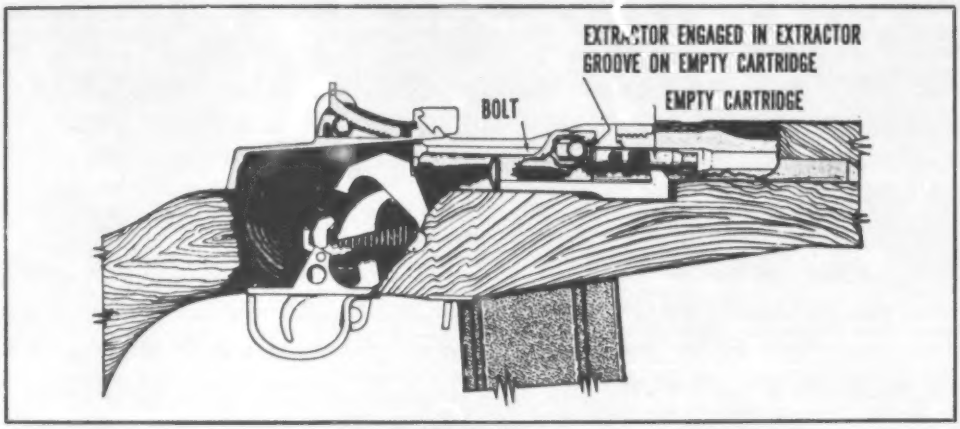
Action of the gas.



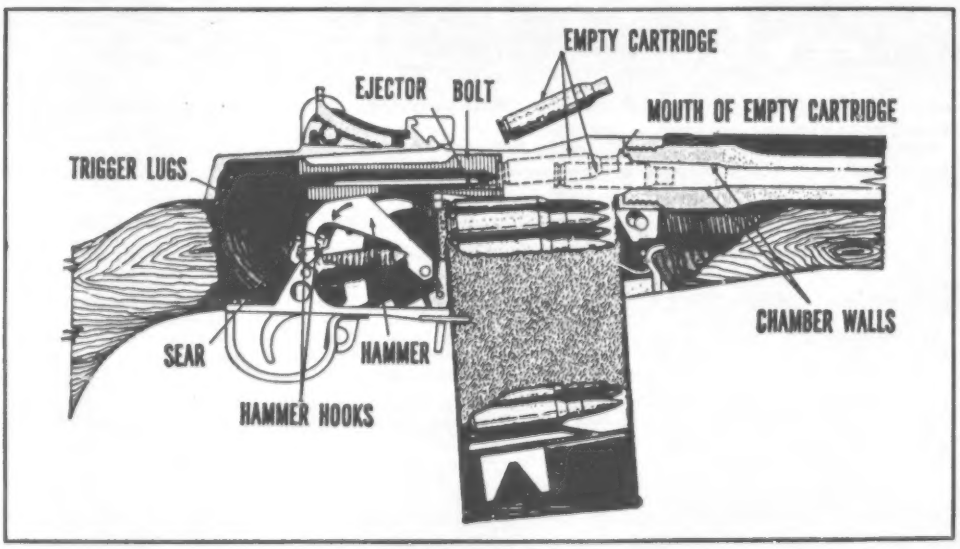
Unlocking.

As the operating rod continues its rearward movement, it unlocks the bolt which extracts the empty cartridge from the chamber. As soon as the empty cartridge has cleared the chamber, the ejector in the face of the bolt causes the empty cartridge case to eject upward and to the right. Simultaneously with its forward movement, the bolt strips a new round off the top of the magazine, feeds it into the chamber and locks itself in the locking recesses of the receiver. Now, when the trigger is pulled, the hammer is released, strikes the firing pin, and the whole procedure starts all over again. In full automatic fire, a selector prevents the hammer from being held and it continues to spring back and strike the firing pin until the trigger is released.

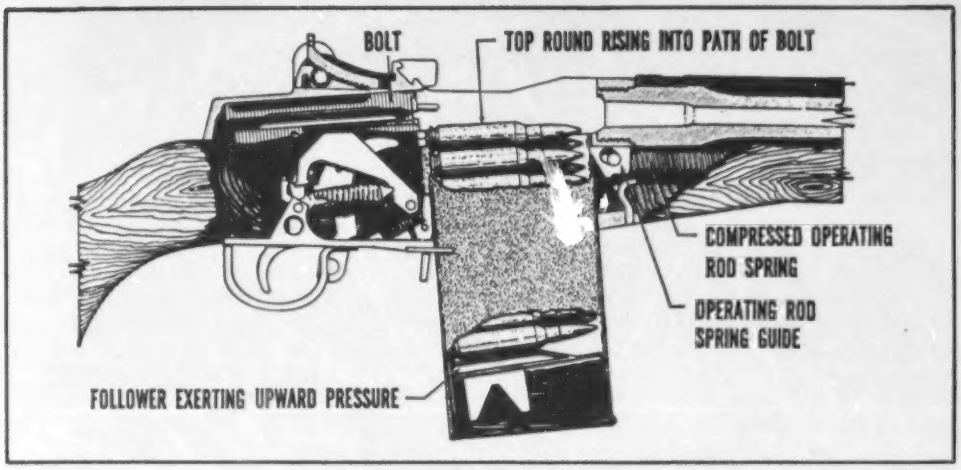
This is a simplified description of an operation which can be compared to



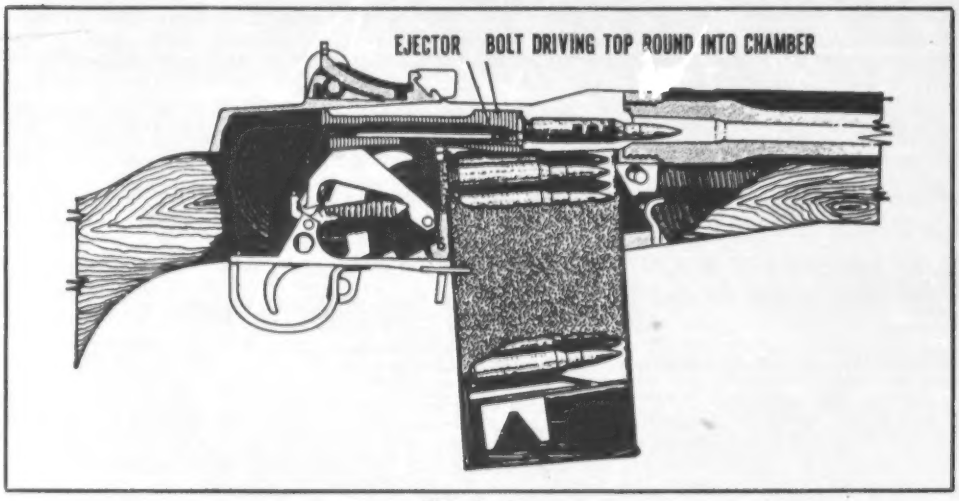
Extracting.



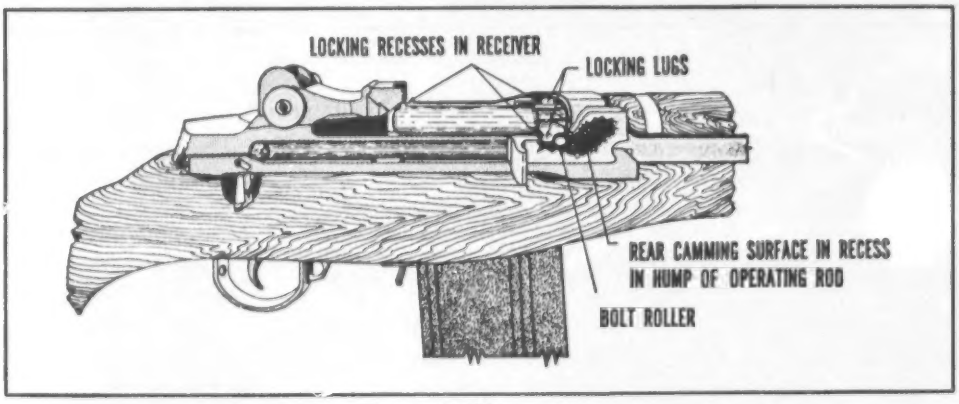
Ejecting and cocking.


BOLT
TOP ROUND RISING INTO PATH OF BOLT
COMPRESSED OPERATING ROD SPRING
OPERATING ROD SPRING GUIDE
FOLLOWER EXERTING UPWARD PRESSURE

Feeding.



Chambering.



Locking.

a split second chain reaction involving many different parts acting one upon the other. The important thing for you to remember is that this cycle is based on the principle of expanding gas which sets in motion seven steps; firing, unlocking, extracting, ejecting, feeding, chambering and locking.

CARE AND CLEANING

The routine care of the M-14 is a relatively small job requiring only a few minutes; however, it is vitally important if it is to pass inspection, and, of course, if it is to function properly. First, you should inspect the weapon, as you would any weapon, to make sure it is not loaded. Then field strip it, and with a dry rag, wipe off all old oil and dirt. Use a tooth brush to clean recesses, corners, screw heads, etc. Run a dry patch through the bore to remove the old oil and dirt. Repeat this process until several patches come out clean. If the bore should remain dirty, use a bore brush with bore cleaner, running the brush completely through from muzzle to chamber and back again, in repeated long strokes until it is clean. Be careful not to scrub the brush back and forth in the bore. This breaks the wire bristles and ruins the brush. Use additional patches until they finally come out clean. Then run a lightly oiled patch through the bore, being careful not to forget the chamber. Put a light coat of oil over all exposed metal parts, being careful not to trap perspiration off your fingers under the oil where it can cause rust.

The M-14 is a sturdy, reliable rifle, but like any piece of machinery, it must be cared for in order to function properly.

CHAPTER 21

THE SIDEARM

HISTORY OF THE .45 PISTOL

Often imitated, and long held in military circles as the criterion for semiautomatic sidearms, the .45 pistol is a tribute to the genius of John Moses Browning. This venerable sidearm is but one of several weapons designed by him, and contrary to the many changes in shoulder weapons, has not been improved upon sufficiently to justify its replacement.

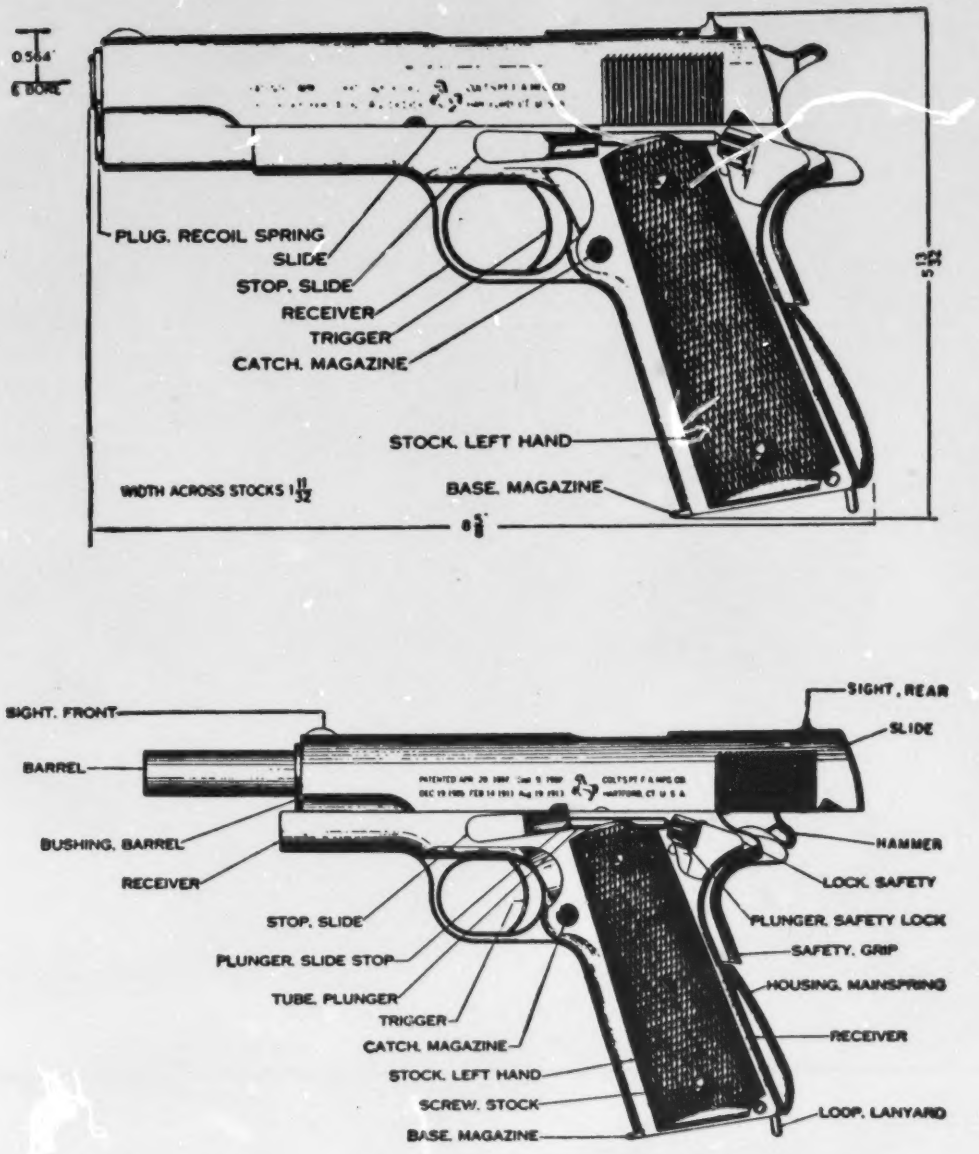
Shortly after the turn of the century, semiautomatic pistols, which had been commercially successful, attracted the notice of the military. Numerous designs were submitted to the government by American and foreign inventors. After a series of tests, by 1907 all were ruled out but three, the Savage, submitted by Savage Arms Corporation of Utica, New York; the Luger, submitted by the DWM plant in Germany; and the Colt (Browning), submitted by Colt's Patent Firearms Company of Hartford, Conn. All of these pistols were. 45 caliber. It was determined that sample orders of these pistols would be placed and the three types field tested. Only the Savage and Colt pistols were actually delivered, with the Colt finally being selected. During this period a number of modifications were recommended by various ordance boards and certain portions of the pistol underwent changes. The final version was the M1911 which was proudly announced by Colt as having fired 6,000 rounds during tests without jam, misfire, or breaking apart. This pistol was accepted for issue to troops and contracts placed with Colt for delivery.

Prior to the first World War, the M1911 was produced only by Colt and the Springfield Armory. When the war started, new contracts were immediately let for production of the M1911, but during the course of the war only one additional manufacturer actually delivered. The Remington Company of Bridgeport, Conn., produced approximately 13,000 pistols before manufacture was suspended at the close of the war.

Shortly after World War I, additional modifications were recommended, and in the mid '20s the M1911A1 appeared. No major changes were made, and only minor external alterations in its appearance resulted.

Just prior to World War II, the width of the front sight was increased with a correspondingly wider and deeper notch in the rear sight. Again, production by Colt, the sole producer of the weapon between wars, was inadequate to meet the need. As a result, the pistol was also produced by Ithaca Gun Company, Remington Rand, Union Switch and Signal Company, and the Singer Sewing Machine Company. Minor changes continued to take place, the most noticeable being the change from a blued finish to the rougher, nonreflecting, parkerized finish.

All the parts are interchangeable



Pistol .45 Cal, M1911A1.

both between the 1911, the 1911A1 and by the various contractors of all periods of its manufacture. Consequently, some pistols present quite a conglomerate picture after overhaul, particularly if they were disassembled along with a mixed group. This is an academic point, however, since any combination provides the desired result.

In our rapidly changing technology, it is rather remarkable to note that over sixty years ago a man designed a machine which still endures, a machine that will operate even when it has not had the best of care. It has been carried

by Marines for all these years and is better known to a greater age group of Americans than any pistol in the World. It has been the comfort of Marines in four wars and numerous campaigns in "every clime and place where we could take a gun."

CHARACTERISTICS

The U.S. Pistol, Caliber .45 M1911A1 is a recoil-operated, magazine-fed, self-loading hand weapon. This description is somewhat different from the ones we have studied before, so let us consider a few of the definitions.

Recoil-operation involves a different principle from gas operation. In a gas operated weapon, the expanding gases are tapped off into a cylinder and expand against a piston which pushes an operating rod. The rod sets in motion the various parts which then perform the cycle of operation. In recoil operation, the pistol utilizes the direct thrust of the gases against the face of the slide to force the slide and barrel to the rear and perform the cycle of operation.

The pistol is considered a short recoil weapon because the slide and barrel remain locked together in the rearward movement for only a short distance before the barrel is unlocked from the slide. The slide then continues to the rear, free of the barrel.

Magazine fed means that the pistol is fed from a seven round box type magazine instead of having the rounds in a cylinder as with a revolver.

The pistol is a self-loading weapon because the recoil is utilized to extract and eject the empty cartridge case, cock the hammer and to reload.

A hand weapon is simply one designed to be aimed and fired with one hand.

The maximum effective range of the pistol is fifty meters. That may seem to be a very short distance, but the sidearm is primarily used for close-in protection and not as an offensive weapon. The men armed with the pistol, besides officers, are usually those whose jobs require that they use their hands in the performance of their duty, such as personnel manning crew-served weapons.

There is a total of thirty-nine pistols in a rifle company; four in company headquarters, three in each platoon headquarters and twenty six in the weapons platoon.

SAFETY

There is one cardinal rule concerning the pistol which must be observed at all times. It is always considered loaded until proven otherwise. Of course, this applies to all weapons, however, this is especially important with pistols because they are easy to pick up, wave around, and generally handle in a dangerous manner. Never point a pistol, or any weapon, at anyone; it's the "unloaded" guns that always cause accidents. The only way to guarantee that the pistol is safe is to execute unload every time it is picked up. To execute unload follow these steps:

Raise pistol
Withdraw magazine
Pull slide to rear and lock
Inspect chamber
Release slide
Pull trigger
Insert magazine

FIELD STRIPPING

As with the other weapons, all we will deal with here is field stripping. First make sure the pistol is unloaded by pointing it in a safe direction. Then remove the magazine by pressing the

.45 Pistol Disassembly—removing recoil spring plug.

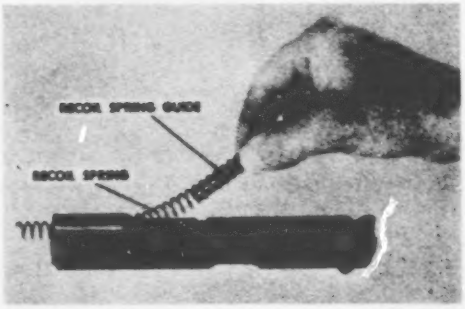
.45 Pistol Disassembly—removing slide stop.

magazine catch, pull the slide to the rear and inspect the barrel and chamber for live rounds. Release the slide and lock the safety lock. Rest the butt of the pistol on a flat surface, barrel and receiver group in a vertical position, butt down and pointing towards you.

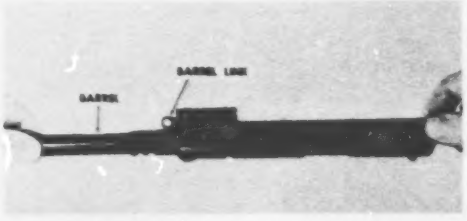
Press the recoil spring plug inward and turn the barrel bushing clockwise. Keep pressure on the recoil spring plug so that it will not fly out of the slide under tension of the recoil spring and be lost or strike the operator. Remove recoil spring plug from recoil spring by turning counter-clockwise. After removing the recoil spring plug, turn the barrel bushing counterclockwise and remove the barrel bushing from the slide. Push the safety lock down and draw the slide rearward until the small recess in its lower left edge stands above the projection on the thumb piece of the slide stop. After positioning this recess, press in on the end of the slide stop that protrudes from the right side of the receiver above the trigger guard and remove the slide stop.

This releases the barrel link, allowing the barrel with the barrel link, the link pin and the slide to be drawn forward from the receiver, carrying with

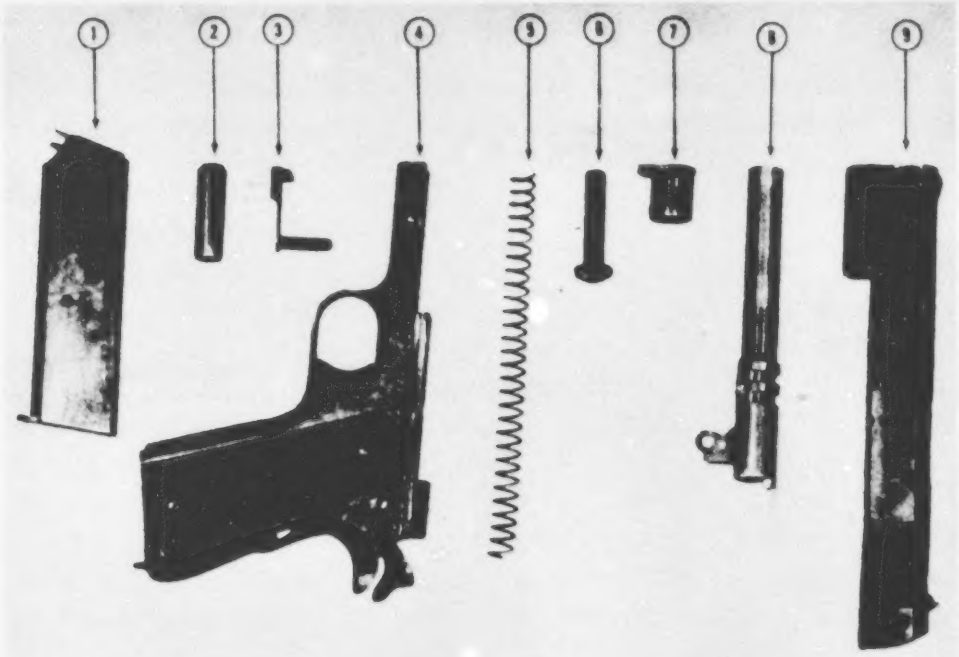
Field Stripping (Removal of Slide Group).



Remove the recoil spring guide and recoil spring. Separate the two parts with a twisting action.



Push the barrel link forward and remove the barrel from the front end of the slide. This completes field stripping.



1. MAGAZINE ASSEMBLY
2. RECOIL SPRING PLUG
3. SLIDE STOP
4. RECEIVER GROUP
5. RECOIL SPRING
6. RECOIL SPRING GUIDE
7. BARREL BUSHING
8. BARREL
9. SLIDE GROUP

Parts of the pistol in order of disassembly.

them the recoil spring and recoil spring guide. Remove the recoil spring and the recoil spring guide from the slide by pulling them up and out to the rear. Separate these two parts by pulling the recoil spring guide from the recoil spring with a twisting motion. Next push the barrel link down flat against the barrel, then the barrel with the barrel link may be drawn forward from the slide and by pushing out the barrel link pin the barrel link is released from the barrel. The pistol is now field stripped. This is sufficient stripping for proper care and cleaning and further stripping should not be done by the individual.

To reassemble the pistol the stripping procedure is simply reversed.

FUNCTIONING

We have already touched on functioning in the explanation of recoil operation, however there are a few more steps that take place in the pistol's cycle of operation.

Once the loaded magazine is inserted in the receiver, the slide is drawn to the rear. This movement cocks the hammer and compresses the recoil spring. When the slide reaches the rear position, the magazine follower raises the top cartridge into the path of the slide. The slide is then released and forced forward by the recoil spring, carrying the first cartridge into the chamber. The slide also forces the barrel forward and when they have reached their forward

position, they are locked together by the locking ribs on the barrel. When the slide and barrel have been stopped in their forward motion, the pistol is ready to fire. There are, however, certain safety features that must be dealt with before a round can actually go off.

1. The grip safety must be pressed in, leaving the trigger free to move.

2. The slide must be securely forward.

3. The safety lock must be down in the unlocked position.

On squeezing the trigger, the released hammer strikes the firing pin which transmits the blow to the primer of the cartridge. The pressure of the gasses generated in the barrel by the explosion is exerted forward against the bullet, driving it through the bore, and in a rearward direction against the face of the slide, driving it and the barrel to the rear together. As the slide continues to move to the rear, it opens the breech, cocks the hammer, extracts and ejects the empty shell, and compresses the recoil spring until the slide reaches its rearmost position.

The magazine spring then pushes another cartridge in front of the slide, and as the slide is forced to return by the action of the recoil spring, it feeds the cartridge into the chamber and the pistol is ready to fire again.

When the magazine has been emptied, the slide is held to the rear by the action of the slide stop, thus serving as an indicator to the shooter that he must insert another magazine. To release the slide from the open position, press upon the thumb piece of the slide stop, and the slide will go forward, carrying a new cartridge into the chamber and the pistol is again ready to fire.

Cleaning of the weapon involves the same procedures involved in the cleaning of the other weapons we have studied; field strip, remove old oil, use toothbrush in recesses, oil lightly, and store in a safe place.

Again, bear in mind that the .45 was designed primarily as a short range, defensive weapon. Because of its comparative bulk, it may feel akward to hold, especially for people with small hands, but it has been around for a long time because it is reliable and effective. All in all, this compact, two-and-a-half pound fistfull has covered many a mile in Marines, holsters and is probably destined to cover many more.

PART FOUR
PASS IN REVIEW

In the military, knowledge of the weapons in your unit is as important as knowledge of the tools of your trade in civilian life.
Based on what you have learned in this chapter:

1. What do you think was the major improvement in the M-14 over the M-1?

2. Explain the differences in the principles of gas operated and recoil operated.

3. In an infantry unit, pistols are usually carried only by the officers and senior staff NCOs. What do you think is the reason behind this practice?

4. In your opinion, why do you think the .45 pistol has been in service for such a long period of time?

5. Even though the pistol in use now is an automatic, what do you think might be an advantage of a revolver over a pistol?

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